Florida WILDLIFE

Fishing · Hunting
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Outdoor Recreation

JULY 1972

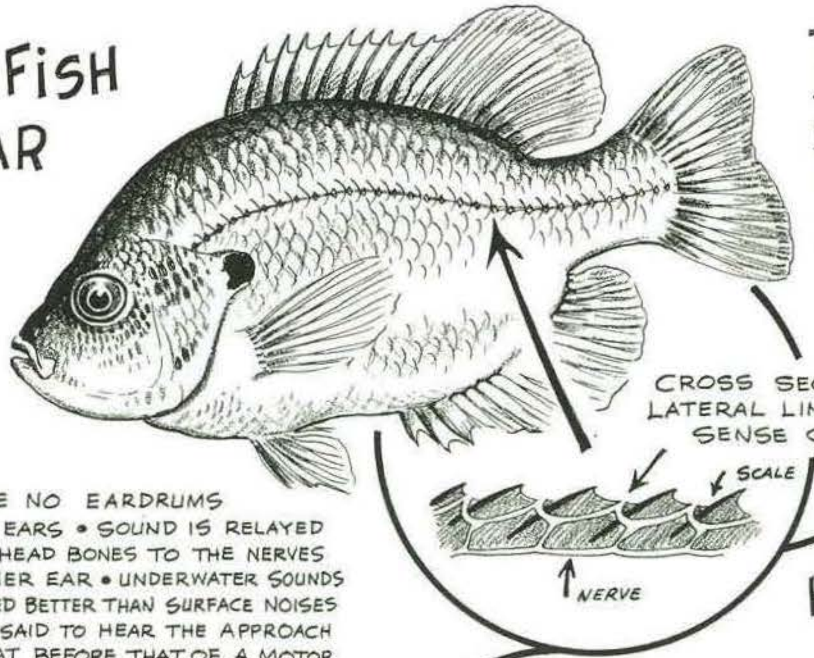
The Florida Magazine for all Sportsmen

25 CENTS

Fresh Water Clams
Summer Fishing

Florida Wildlife Scrapbook

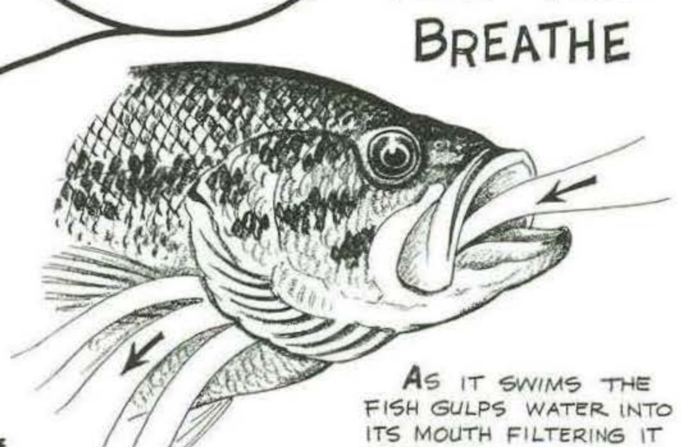
HOW FISH HEAR



THE LATERAL LINE CONTAINS SENSE ORGANS ENABLING THE FISH TO DETECT LOW FREQUENCY VIBRATIONS THAT TO HUMAN EARS WOULD SOUND LIKE A DULL RATTLE • THE LATERAL LINE MAY ALSO AID THE FISH TO ADAPT TO CHANGES IN WATER TEMPERATURE

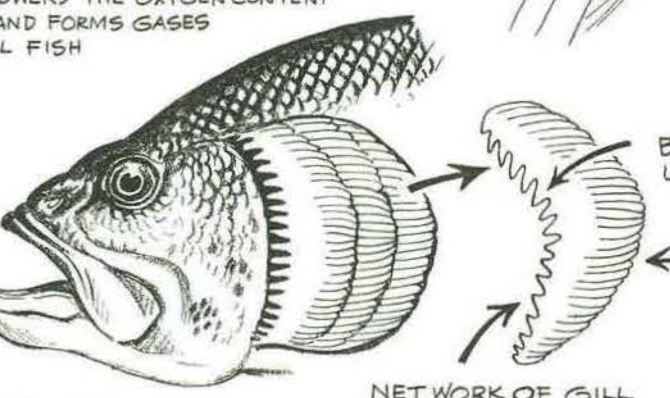
FISH HAVE NO EARDRUMS OR OUTER EARS • SOUND IS RELAYED THRU THE HEAD BONES TO THE NERVES OF THE INNER EAR • UNDERWATER SOUNDS ARE DETECTED BETTER THAN SURFACE NOISES • BASS ARE SAID TO HEAR THE APPROACH OF A ROWBOAT BEFORE THAT OF A MOTOR BOAT • THE FISH'S EQUILIBRIUM OR BALANCE IN THE WATER IS CONTROLLED BY THE INNER EAR •

HOW FISH BREATHE



THE GILLS OF THE FISH SEPARATES DISSOLVED OXYGEN FROM THE WATER • SOME SPECIES OF FISH CAN LIVE ON LESS OXYGEN THAN OTHERS • FISH WOULD SUFFOCATE IN BOILED OR DISTILLED WATER • THERE IS MORE DISSOLVED OXYGEN IN COLD WATER THAN IN WARM WATER • POLLUTION LOWERS THE OXYGEN CONTENT OF WATER AND FORMS GASES WHICH KILL FISH

AS IT SWIMS THE FISH GULPS WATER INTO ITS MOUTH FILTERING IT THRU ITS GILLS WHICH ABSORB OXYGEN AND EXPEL CARBON DIOXIDE



BONY GILL ARCH — USUALLY 4 IN NUMBER

GILLS ARE SOFT, FLESHY FILAMENTS SUPPORTED BY THE GILL ARCHES • MANY TINY BLOOD VESSELS COLOR THEM BRIGHT RED

BASS WITH GILL COVER (OPERCULUM) REMOVED TO SHOW GILLS

NETWORK OF GILL RAKERS PREVENT THE GILLS FROM BEING CLOGGED BY DEBRIS IN THE WATER

Florida WILDLIFE

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Publications Department

BILL HANSEN *Editor*

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GENE SMITH *Associate Editor*

NANCY CHOIKE *Production Assistant*

C. L. SATTERFIELD *Circulation*

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The Cover

Familiar, yet little known, describes the Eastern Belted Kingfisher, an extremely wary little bird commonly seen perched around water. The female wears the russet-colored plumage. See page 6.

From A Painting By Wallace Hughes

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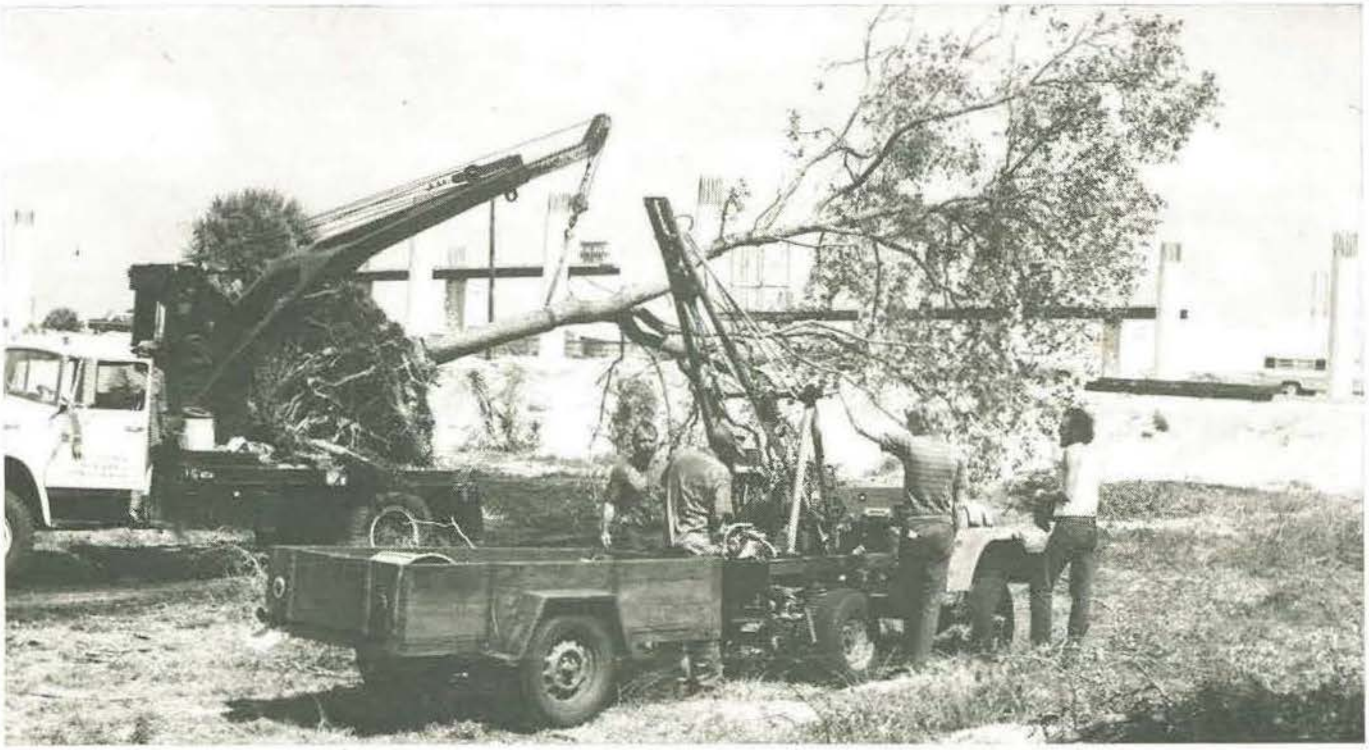


Photos By Karen Alt

Students . . . Save That Tree!

THEY WERE A small band of college kids led by a young professor. They were short on equipment, but long on motivation and willingness to work. Perhaps they could not have moved mountains, but they proved they could move trees.

It all began when John Freeman, chairman of the mathematics department at Florida Atlantic University, Boca Raton, became concerned over the rate at which fine trees were being destroyed to clear a right-of-way for construction of Interstate Highway 95, which will pass through the western portion of town.

Not being one of those content merely to express his concern for our threatened environment, Freeman decided to do something about it—to get involved. He enlisted the aid of a few other concerned teachers and students at the college, and they began to dig up trees and replant them on the practically shadeless campus of F.A.U. It was no mean undertaking, and they knew it from the start.

The ambitious project meant giving up precious free time that otherwise would have been used for sports, relaxation, dates, etc.

As the days stretched into weeks—seemingly without much headway being made—the unskilled workers wondered whether they had not tackled a project that would prove too much for them. It was hard manual labor, pure and simple.

Deep trenches had to be dug around the root systems of cabbage palms, oaks, and other heavy trees. The thickly tangled roots then had to be carefully chopped or sawed, but not too close to the trunk, else the tree would die. Hands soon became blistered and raw. Necks and backs and legs ached from muscle strain and the effects of the relentless south Florida sun.

The only vehicle available for lifting the rescued trees and transporting them to the college campus was a truck with a rickety A-frame and hoist. It was capable of moving only small trees. Even with these it broke down repeatedly.

In spite of all this, the determined diggers worked on—on their own time, without pay. And they appeared to be working without much notice from the rest of the community. Others were watching, however, and they were being impressed. Gradually, more students and teachers joined the weary ranks. Even co-eds picked up shovels and joined the labor force, tasting the sweaty satisfaction that comes only from having rescued something in nature otherwise doomed, even at the cost of broken fingernails, sunburned skin, aching muscles, and grimy clothes.

"You hear a lot about ecology these days; the great need for us to save what little of nature is left. But how many citizens are willing to do something about the problem?" Professor Freeman was overheard to ask. "Practically everyone involved in this project is truly concerned about today's crisis—enough to get out and sweat . . ."

Meanwhile, many of the most beautiful of the threatened trees were proving too large for the group to move. It seemed such a shame to leave those magnificent old sentinels just standing there, defenseless before the massive road building machines about to descend upon them.

In desperation, the tree-savers appealed to the local newspapers to echo their plea for help. Local nurseries responded, loaning their heavy equipment. The larger trees could at last be moved.

The project was launched in September 1971. During the first six months, more than 150 persons from the college community took part, working, for the most part, in relay groups of a half-dozen or so at a time. Nevertheless, by the following April, over 250 trees had been removed from the right-of-way and replanted at F.A.U.—with a surprisingly high survival rate of about 90%, not bad for amateur tree movers!

But best of all, the students' and teachers' example seems to be inspiring other citizens of Boca Raton to join the ranks. On a recent weekend, hundreds of city residents, young and old, descended upon the I-95 right-of-way at a designated site. Their aim: to "save a tree" by digging it up, hauling it home, and replanting it in their own yards.

True, many of the estimated 1,000 shrubs and trees moved from the site by day's end likely have not survived, largely because of inexperience on the part of the energetic participants; nevertheless, the scene was encouraging, and many valuable plants were given a new lease on life.

Thinking about that, it is not much, really, to give a tree in return for its years of giving us its own special gifts: shade, beauty, homes for birds, and that priceless product we all must have, and that all plants manufacture, the oxygen we breathe.

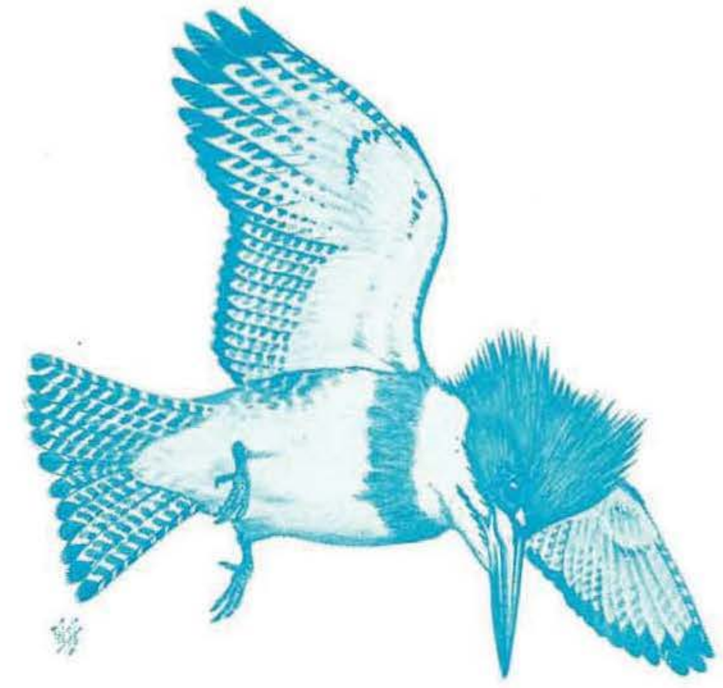
Other citizens everywhere would do well to follow the example of Professor Freeman and his small shovel brigade, and that of the people of Tallahassee, who have organized and conducted successful plant rescue operations on the right-of-way of I-10 just ahead of the bulldozers, and with the full cooperation of state and federal highway builders from top administrators to the machine operators themselves.

With some basic knowledge of gardening, and with reasonable care and a lot of hard work, any but huge old trees can be transplanted. But none of this can be accomplished unless someone is willing to make a beginning; to take the lead in getting the project underway. When that person or a small group steps forward, chances are the necessary equipment can be found, and so can the dedicated laborers.

How about you? ●

By KAREN ALT

A small-but-lovely oak tree is hoisted and secured, above left, for the ride to Florida Atlantic University. I-95 construction proceeds in background. The author, at left, stands by the crude marker that guided participants to a digging site. The oak finds a new home on campus, below, where, with luck, generations of students will find shade.



Belted Kingfisher

By GENE SMITH

THE KINGFISHER is a kook. It feeds like a brown pelican, nests like a "bank swallow" (the rough-winged swallow), coughs up pellets of undigestible food like an owl, and can hover in midair like a sparrow hawk. It is one of the few land birds in the world that depend almost entirely on aquatic habitat for its livelihood, and it even dives into the water to capture its prey—very strange behavior for a land bird. Also, the kingfisher is one of the few species of birds in which the female wears more color than the male.

But for all its eccentricities, no other bird is more predictable than the familiar little fisherman in feathers, and no other bird looks or sounds like him. Consequently, he is quickly and easily identified by practically everybody.

Yet, not many people ever get to know this big-headed, double-crested, heavy-billed, blue-and-white bird, found throughout the State, except on the Keys, where, according to Howell and Sprunt, it occurs as a migrant or winter resident only. (There is a single record of a pair of kingfishers that nested at Flamingo, on the tip of the mainland of Florida. The rest nest from central Florida northward to central Quebec and Newfoundland.)

The eastern belted kingfisher, *Megaceryle alcyon alcyon,* is only one of two members of its family in North America. It is the only common kingfisher, the other being the green kingfisher, which is found only in southern Texas in the U.S. A wide band of blue-gray across its breast gives the belted its common name, and the female has a band of chestnut color on her chest and flanks.

Kingfishers are commonly seen perched conspicuously around or over any size body of water. Old tree snags, fenceposts, and power lines are favorite perches—from which they patiently watch the water for any sign of dinner on the move.

Upon sighting a small fish or frog, the kingfisher is likely to fly over the spot, hover on rapidly beating wings for a moment, and plummet headlong into the drink to make a catch. He then emerges and returns to one of his perches to finish the meal and await the appearance of the next course. That's how a kingfisher spends his long, lazy summer days —just fishing.

Rarely will more than one of these birds be seen in the same vicinity. They are solitary creatures, except at mating time. A kingfisher establishes his hunting—pardon, *fishing*—territory and defends it quite stoutly against intrusions by other birds. Any feathered creature violating his airspace is likely to be challenged with the impudence of a fighter plane buzzing a super bomber—the kingfisher's characteristic staccato call rattling the air all the while, sounding much like a child's plastic toy machine gun.

Belted kingfishers nest in a bank—sometimes a creek bank; sometimes a road cut. They excavate a tunnel that may run as far as 15 feet from the entrance back into the dark depths, but usually no more than 3 or 4 feet. At the end of the tunnel a small burrow is used to accommodate a nest of rough twigs and rootlets in which three or four eggs are laid—sometimes more.

Infrequently someone will report finding a kingfisher nest in a hollow snag or stump, usually over water, but for the most part they burrow into earthen or shell banks, occasionally occupying the nesting burrows of the aforementioned rough-winged swallow, *Stelgidopteryx ruficollis serripennis,* the "bank swallow," or "sand martin," as it is sometimes known locally.

The pellets it casts consist of bone and scales from the fishes it consumes. Such materials are also cast by hawks, owls, and other birds of prey, except that theirs also contain hair and feathers, claws and small birds' bills—all roughage in the raptors' diets.

Since it is 100% a land bird but 99.9% dependent on water for its living, the belted kingfisher is not often found far from water, either while perching or nesting. But I have under observation for the second summer now a sand-clay roadside bank north of Tallahassee in which this bird appears to be nesting. I see a kingfisher perched on the wires opposite several small entrance holes almost every day during the late evening, but have never actually seen the bird enter either of the burrows. There is no water for at least 600–700 yards. ●

Fishing Skill

there are all kinds of anglers these days—each possessing a firm conviction his particular style of fishing proves to be the "very best method"

By CHARLES WATERMAN

A successful blue marlin fisherman is not necessarily any more highly skilled than a top-notch bluegill fisherman, although most of the world accords him a lot more recognition. It's a good thing not all of us like the same kind of angling, for there wouldn't be enough to go around.

There are some kinds of fishing I don't care for, but I hope I never work up a full-fledged scorn for any sport angling, especially for any that I don't understand. There are all kinds of snobs with one or another form of allegiance. Strangely, some of those who laugh most nastily at somebody else's sport are addicted to pretty coarse methods themselves. Maybe it's a defense mechanism that calls for an angling psychiatrist.

I make no secret of the fact that fly fishing is my favorite method, although I fish about half the time with some other kind of tackle and probably enjoy it about as much. With averted eyes I must confess that some of the stuffiest fishermen in the world are fly fishermen, however high their personal caliber, and there is no pomposity as pompous as that of a dry fly purist who announces primly that his kind of fishing is a way of life beyond the comprehension of common plug casters or spin-fishermen, and that all fish but fresh water trout are rough fish.

I have been casting dry flies for trout off and on for some 40 years and haven't missed a complete season for about 20. It is a wonderful sport and I have even delved into the hallowed depths of Number 22 nymphs and midges, but so far I have been able to wear the same hat I use while bass fishing. I don't know which is more fun. I have been badly outfished by specialists in both fields.

It is with some delight that I have watched an insidious downfall on the part of a few fine trout fishermen who became a little competitive as to fish size, found that some big streamers did better in the weight category, and eventually ended up using rods, lines, and flies larger than I use for Florida largemouth bass. Bass? They were the same rigs I use for snook or tarpon.

One day while wading up to my chest in Idaho ice water it occurred to me that I was hoping for a 4-pound fish with the same tackle I use on 20-pound fish in Florida. I have since concluded that when I fish for trout I'll stick to the light stuff 90 percent of the time.

In my impulsive youth, I was once fishing for trout on a Western river and really tearing them up. I was using a big rod and big flies and had caught several brown trout of more than three pounds, a feat that will get you attention in almost any trout fishing circles. I had kept one of the fish to eat, and after showing it to another trout fisherman (who seemed very old to me at that time) I launched upon a dramatic and instructional lecture concerning the methods I had used. He listened politely, congratulated me upon my success, and, with one comment, went on upstream with his little rod and tiny flies.

"I haven't fished for big fish for years," he said.

I was a little crushed at the moment but I finally accepted the fact that he could undoubtedly catch

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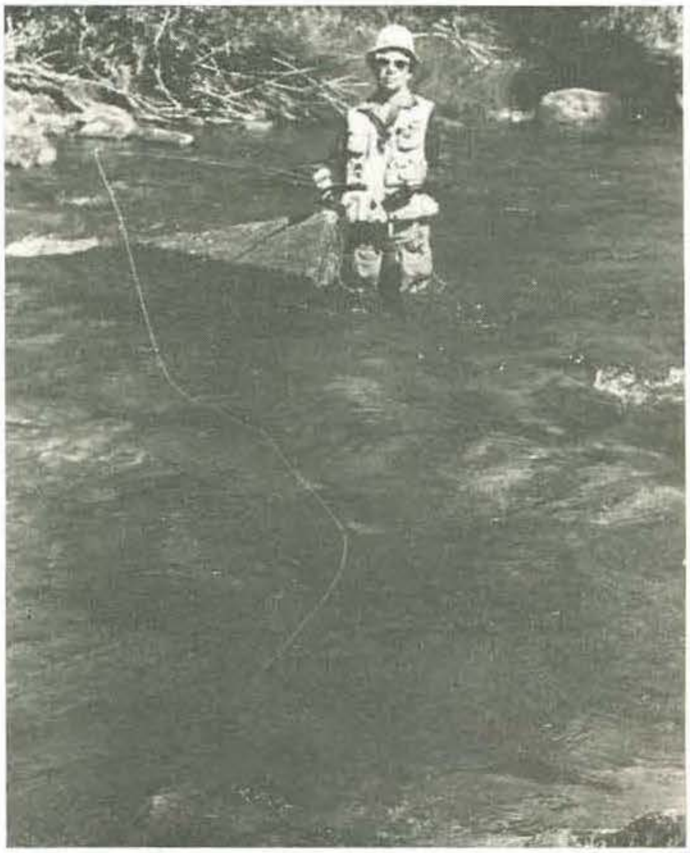


Employing the delicate touch. Some of the finest angling is for northern trout in settings like this, but the kind of fish isn't necessarily the real measure of your skill.

(*Continued from preceding page*)

big trout as well as little ones. He just liked the more delicate methods. Not that tiny flies don't catch big fish under some circumstances, but he was interested in method more than results.

Several shiner fishermen have taken great pains to insult me, but I don't insult easily any more and have the utmost admiration for expert shiner soakers.

Some years back a shiner fisherman talked himself into a purple fury after I mentioned I liked to fish black bass with popping bugs. He roared out the weights of the largest fish he had caught in recent weeks and dramatically asked me how big a fish I had caught during that time. When I confessed I wasn't in the competition, he asked me why I fly fished then. I answered I did it because I liked to, which seemed a pretty good reason to me. He finally pushed me so far that I was forced to comment that a seine is even better than shiners and that grouper grow bigger than bass. That was not very nice, but I still admire good shiner fishermen.

The foregoing may not have been very illuminating, but I have been around this magazine long enough that they ought to indulge me a little now and then.

I GOT A SLOW START on National Hunting and Fishing Day, which is due for September 23rd of 1972 and may possibly become a regular observance. Charley Dickey, former Floridian and now with the National Shooting Sports Foundation, was one of the first pushers for the "day," and I accepted his enthusiasm with lukewarm friendliness. There are so danged many special days, it is hard to arise on a morning that isn't set aside for something.

Then when Congress approved the observance it dawned on me that this was one opportunity to tell what sportsmen have been doing besides catching and killing things (their main purpose in the view of some) and to do it in general news media rather than in columns like this one which are mostly read by souls already saved.

National Hunting and Fishing Day will be used by some public-spirited sportsmen's organizations for how-to projects by way of introducing new sportsmen to hunting and fishing skills. More important, it will be a chance to tell the "outside world" how the sportsmen are the backbone and shoulders of conservation and how the sportsman's dollar is the one that wildlife rides on.

I use that "outside world" term on purpose, for most of the best articles on conservation are read by conservationists who already have the idea. It is a little like the old opinion that the people who go to church are those who need it the least. The National Rifle Association can fill their excellent magazine, THE AMERICAN RIFLEMAN, with logical opinions opposing gun controls, but few of the opposition will ever see those remarks, and most of the readers are in agreement anyway. FISHING WORLD and FLORIDA WILDLIFE are in somewhat the same boat regarding sports fishing. I doubt that many non-fishermen are toiling through this.

All of this is human nature. Very few Republicans attend Democratic rallies or the other way around, preferring to hear what they already believe or want to believe. Perhaps through a National Hunting and Fishing Day we can get some honest reportage of what hunters and fishermen

A large share of Florida's black bass are caught in or near hyacinths, but a really careful fisherman will search for another attraction, like lily pads, in most cases.

are doing for the environment and we might even erode the idea that when fishing gets poor it's a simple matter of the fishermen having caught and killed all the fish.

I also hesitatingly say that sportsmen might be able to separate themselves to some degree from fellow travelers who haven't made our lot any easier—the "instant ecologists" and preservationists who have decided we should never cut another tree, kill another quail, or eat another fish. Bless their misguided hearts, but may their ardor be slightly cooled.

I FREQUENTLY HEAR that Florida fish limits are too liberal, despite the popular scientific opinion that hook and line cannot hurt our fishing. I also hear agitation for closed spawning seasons in areas where bass fishing seems to have slipped. These are perpetual issues, and no amount of biological reasoning will quell them. There are some places where there may be sound basis for reduced takes by fishermen.

There is one argument for a closed spawning season, although the closures are virtually gone in the United States, the theory being that there'll be enough little bass as long as there are suitable spawning places and temperatures. The one logical opposing argument is that a preponderance of extra-large bass are caught at spawning time, and thus the big fish are reduced even when the overall population is not affected at all.

I heard a veteran guide say that in his territory the big fish are nearly all gone, yet there are more bass than a few years back. His territory is very heavily fished, and I can see how he could well be correct for very few anglers will release a bass over four pounds, hardly any releasing one over six pounds. When I was about to turn loose a 10-pound bass years ago, I was told that I owed it to Florida's fishing reputation to bring it in and let it be seen. I don't catch many 10-pound bass (and none lately) but I am in the habit of releasing most of the fish I catch, simply because I don't need them and am too lazy to clean them for someone else.

It is quite likely that keeping a really big bass is good for the overall population but it's one less whopper to fish for—and there aren't that many.

HYACINTHS, having both good and bad effects upon fishing at various times, can be deceptive for shoreline fishermen. A bank of hyacinths can provide a false shoreline that may be a considerable distance from the true one. Many fish have been caught along the edge of a hyacinth bank, but there are many times when you're wasting time there and you'll often have much more success by moving along until you find a spot where you can cast close to the true edge, usually marked by grass, brush, or trees.

Not only is the "true" edge the best spot for bass and panfish in many cases, the banks of hyacinths that make a ragged outline tend to concentrate fish in the places where there are breaks that extend into the land. Some of these breaks occur when hyacinths are caught in obstacles. Others are the result of some sort of run-in or small creek.

Drifting hyacinths can have fish, but when you find a stationary clump it is very frequently caught on something beneath that's attractive to fish. Sometimes it marks a patch of bonnets hidden by the floating stuff.

In fishing for bluegills the other day we had little success along the edges of the main rafts of hyacinths, but were in business quickly when we cast at little wads that were somewhat offshore and not drifting. They marked small bunches of lily pads, but completely hid them. This doesn't mean there are no fish under solid rafts of just hyacinths, but there is added attraction in stems that are attached to the bottom.

Incidentally, plastic worm fishermen who are working the bottom for bass are often defeated by the gunky carpet of hyacinth roots that have sunk after hyacinth spraying or freezing. Even a weedless worm rig turns into a ball of black goo under those circumstances.

PLANNING TO RETIRE to Florida, quite a few Northerners write to me for a suggestion as to just where they can live and have fishing at their doorsteps. The ideal situation, they feel, is to be on a good bass lake or some topnotch salt water fishing with the boat tied within view of the kitchen window.

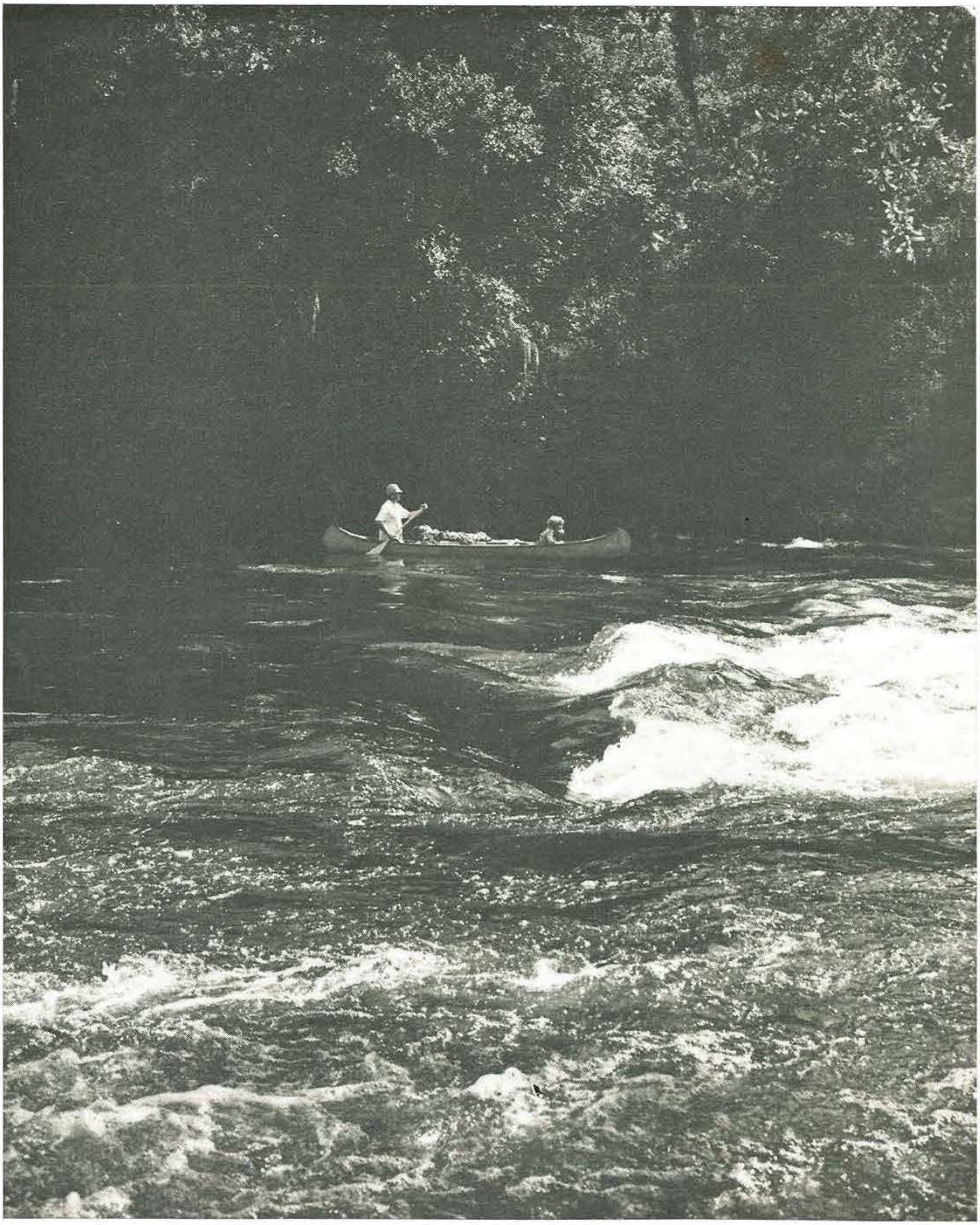
All of this is a worthy objective, but it's more logical to look for a place with several spots for your kind of fishing within 50 miles or so. I know many retirees who have chosen a home very near to good fishing water but have found it was a seasonal thing and that they generally had to do some traveling.

I'm afraid year-around fishing from the same dock and within ten minutes of a rocking chair is hard to find any more. Even though you move to the land of sun and fish the chances are you'll have to move around a little if your fishing holds up. Some retirees have refused to look any farther than the water they live against, say fishing has gone to pot, and sulk about it.

Fishing waters change seasonally as well as over the long haul. If I knew a place where the fishing was always good I'd sell my boat trailer and live there.

My advice, as I have written it many times, is to find a locale that's pleasant, and within 50 miles of several kinds of fishing. There are still plenty of sites like that in Florida. To plan your life's angling about one short stretch of water is a mistake. ●

The Chipola River



ALL THE WORLD'S rivers have one thing in common: humble beginnings. Each rises as a mere trickle from some remote spot at the highest elevation in its drainage. A few of them swell to immense and even frightening size as they meander to the sea. These are the great rivers well-known in human history for having played major roles in the settlement and exploration of continents, and they continue to serve as important arteries of commercial shipping.

There are other rivers, however, that offer beauty and tranquility instead of history and utility. They are the small ones, not much in the news, too crooked and too shallow to accommodate commercial craft, and very often too rocky for easy passage of the average pleasure runabout. These lovely *little* rivers attract mostly canoeists and sport fishermen of the putt-putt outboard-and-jon boat school. And, if we're lucky, they have attracted only light, clean industry, if any at all, and only dinky little tumbler-type dams that can be stepped over or around—if any at all. Such streams are getting fewer and fewer, which makes those that remain all the more valuable. In their "unimproved," "undeveloped," and relatively unspoiled state, *they* serve human needs too, being among the world's finest outdoor recreation areas, and certainly the cheapest to operate and maintain. Furthermore, they cost the taxpayer nothing to begin with.

By GENE SMITH

Just such a river is the picturesque Chipola. It is born of the union of Marshall and Cowarts creeks in north Jackson County, just below State Road 2. From that point it winds 85 scenic river miles southward across the Florida Panhandle, passing through the rolling hardwood forests and outlying farmlands of Calhoun County to its confluence with the Apalachicola River a few bends below the Dead Lakes in Gulf County—from which point it's another 20-odd miles to salt water and historic Apalachicola Bay on the Gulf of Mexico.

The Chipola River has charmed generations of

(Continued on next page)

High point of a canoe trip down the Chipola is passing Big Look-and-Tremble Shoals, shown here from two viewpoints, located a mile below SR 274 bridge, north Calhoun County. Boat channel is close to the east bank here and at Little Look-and-Tremble, just below the mouth of Rocky Creek in south Jackson County. White water is unusual in Florida.

Photos By William Greer

(Continued from preceding page)

local residents, and in recent years, increasing numbers of visitors from other Florida counties, and from out-of-state, have discovered it. They always come back to enjoy the little river's cool water, quiet beauty, and fine fishing. It is a clear stream at any but extreme flood stage. Most of its flow, which measures 1500 cubic feet per second at the midway point of her length, comes from sparkling springs, dozens of them, but only one being a *first magnitude* spring—one that discharges at least 100 cubic feet of water per second.

Blue Springs, located 5 miles northeast of Marianna, is the big one. Its run is the largest tributary of the Chipola. From its limestone depths flows an average of 163 c.f.s., or 105 million gallons of water per day, all of it a tingling 70° F. Blue Springs has long been a popular spot for a family outing. Floridians have been swimming and picnicking there since buggy and Model-T days—and the Indians used it long before that.

The Blue Springs is surrounded by private property (open to the public), but there is another blue spring inside Florida Caverns State Park, just north of Marianna, and it is a first class swimming, picnicking, and camping area for park visitors.

Blue Springs Run flows through a most atypical millpond—really a 4-mile long, 340-acre lake—noted all over north Florida and southern Alabama and Georgia for fine largemouth bass, bluegill, and shellcracker fishing. It's called Merritts Millpond. Anglers there are tantalized by the sight of big 'uns passing over and around their baits or lures only to disappear into the greenery that covers the bottom in most places. Happily, though, a lot of them bite.

The run joins the Chipola a short distance south of U.S. Highway 90 after having squeezed through the gates of a small powerhouse there in a thundering torrent of white water and flying spray. (I rarely drive by without stopping to look and listen and enjoy the view downstream. It resembles a rushing mountain stream.)

Fishing has been good year in and year out in both the Millpond and the Chipola River, the upper reaches of which contain a bonus fish, the Chipola bass (*Micropterus coosae*), also known in various parts of its range as the Coosa, redeye, or shoal bass.

Photo By Gene Smith

Not a place to water ski, but some of the best fishing waters in the South. That's Dead Lakes, on the lower Chipola, near the town of Wewahitchka in Gulf County—a 3600 acre impoundment popular for bream fishing. Scrappy Chipola bass, above, is smaller than largemouth and found only in the upper river.

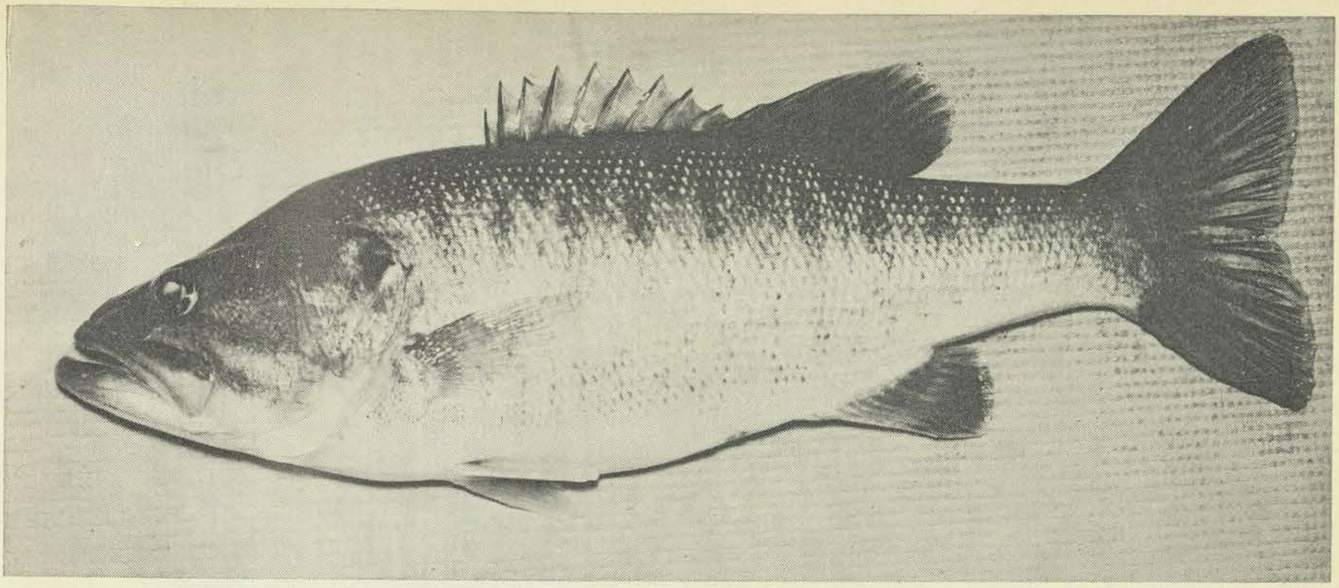


Photo By Bill Hansen

It does not grow as large as the largemouth, but makes up for this minor deficiency in fight. The species is found, in Florida, only in the Apalachicola watershed, although it ranges widely in Georgia and Alabama stream systems, and into Tennessee.

Springtime fishing for "river bream," or "willow bream," which is the redbreast sunfish, is exceptionally good most years, and when the fishing is hot, but before the weather is, the canepolers and fly fishermen are out in force on the Chipola.

A favorite method of angling is to drift lazily downstream casting artificials into the quiet pools and holes around old snags and treetops. Nice strings of bluegill, shellcracker, stumpknocker, and an occasional speckled perch or rock bass can be boated this way, too, not to mention the redbreast bonanza.

Favorite natural baits along the Chipola are crickets and worms—earthworms, wigglers, and catalpa worms. Some of the locals also use hellgrammites, or 'gator fleas, with good results.

The rock bass mentioned is not the striped bass, which is called "rockfish" and "rock bass" by some. The real rock bass (*Ambloplites rupestris*) looks a lot like a warmouth, except for larger eyes—hence its local name, goggle-eye. It is found in the deep water of the upper river, often in the springs and spring runs.

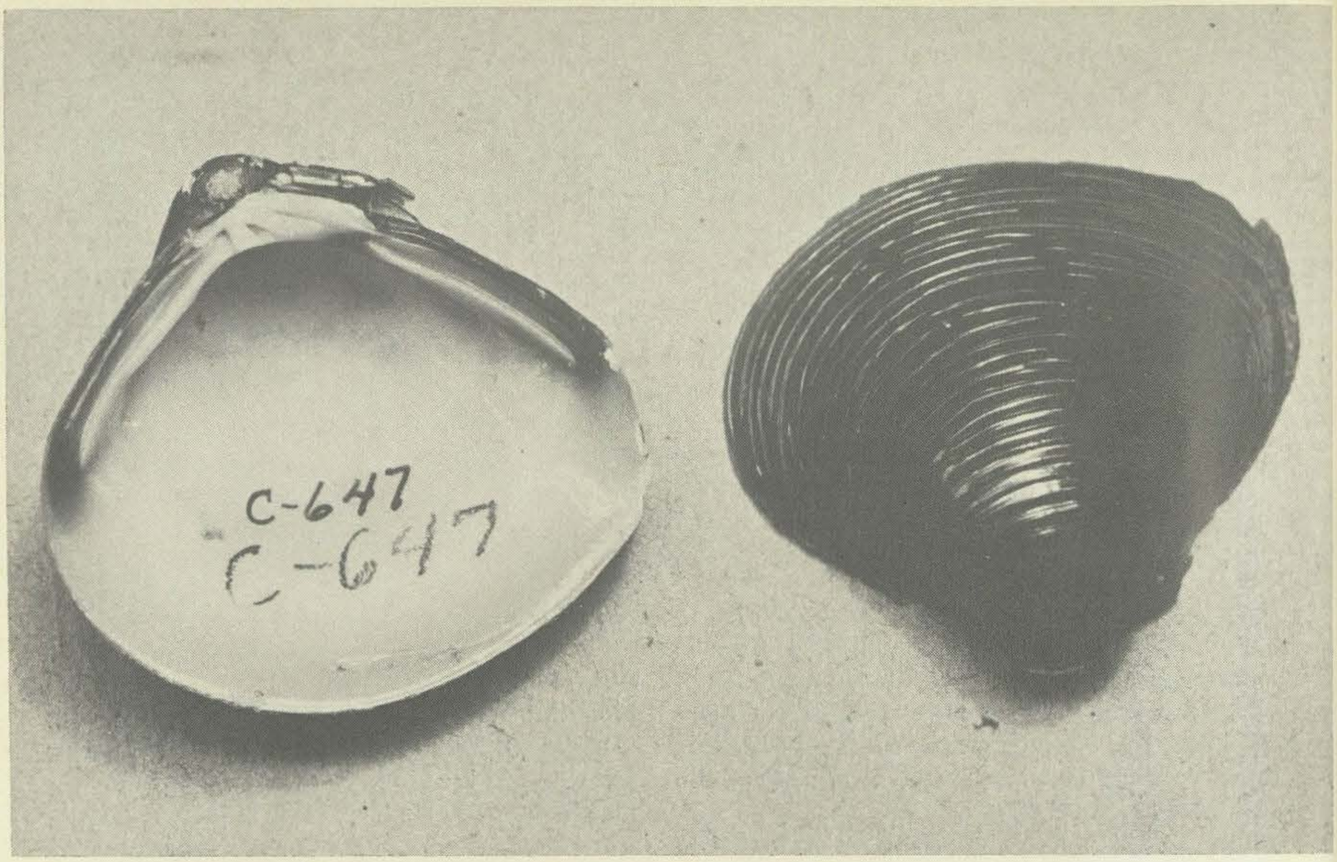
Striped bass (*Morone saxatilis*) are, of course, the big silvery fish caught seasonally below Dead Lakes Dam. Some of them hit 30 or 40 pounds or more. They congregate behind the dam twice a year: on their way upriver to spawn in the spring, March to May; and during a fall run, late September to December. The cool weather run is most productive for anglers, but actually, striped bass have been caught during every month of the year somewhere in the Apalachicola-Chipola watershed. Try for them around the mouths of tributary creeks—and below the little Dead Lakes Dam and the big Jim Woodruff Dam on the neighboring Apalachicola.

The Dead Lakes is a story in itself, and it has been the subject of many a one in national outdoor magazines. This body of water is a cypress-rimmed, stump-filled fisherman's dream. It has been a favorite of anglers from all over the Southeast for years. Bass and bream fishing have at times been phenomenal, especially the shellcracker fishing.

Dead Lakes was formed by the natural levee-like formation of the banks of Chipola River Cutoff back in early geologic times. The "lake" once fluctuated naturally with the rise and fall of the river. It was stabilized with a low dam about 10 years ago, but now there are plans to install some type of water control mechanism that will permit the lowering of the lake's water level in order to facilitate fish management work as required. The old ups and downs of natural fluctuation apparently contribute much toward the general health of any lake, which usually finds expression in topnotch game fish production and, therefore, in topnotch sport fishing. It's the same with impounded waters, only man must call the shots. Drawdown will improve the fishing in the famed Dead Lakes, it is believed.

Some of the Chipola River's most consistently good fishing is in the lower river, the magnificent stretch between the dam and the mouth, on the Apalachicola. Small creeks and sloughs are numerous, and each is a prime fishing spot, or, as they say in those parts, "a smokehouse."

From its start as a couple of trickles, the Chipola remains a lovely *little* river for its entire length—except here in the lower part—at high water. Because the channel is quite narrow and the surrounding area considerably flat here, it doesn't take a lot of rise to put the lower Chipola out of her banks. When this happens, even the woods fill up with fish. ●



Fresh Water Clams

A FRESH WATER CLAM commonly used as food in several Asian countries may have food potential in Florida as well. Recent kitchen and laboratory tests conducted in Tallahassee indicate the small-but-succulent meats would very likely meet with approval by most American palates.

Inadvertently introduced into the western United States in the late 1930's, it has become a serious pest with apparently no natural predators or disease organisms to control its numbers or halt its spread.

The Asiatic clam, *Corbicula manilensis* (Philippi), was first brought into California by person or persons unknown, and, by some fashion also unknown, has spread into the Ohio-Tennessee-Mississippi river drainage system, and into all the major drainages of the Gulf of Mexico from Texas to Florida.

Corbicula clams were first seen in Florida in the early 1960's and now occur in huge numbers in lakes, rivers, streams, and reservoirs, particularly in the panhandle, and are moving down into the peninsula. It has been found as far south as Dunnellon.

The Asiatic clam can live in standing water as well as moving water—unlike most species of Florida's native fresh water clams, which occur in moving water only.

Corbicula manilensis have shiny shells, up to about two inches in length, cocoa brown in color, with black ridges and touches of greenish yellow. The inside of the shell is pale lavender to purple. Their shape varies from somewhat triangular to oval. The coarse, concentric ridges on the outside of the shell distinguish it from all other fresh water clams in Florida. Although several native species have shells with bumps and ridges, none show the concentric pattern of *Corbicula manilensis.*

Dr. William H. Heard, associate professor in the Department of Biological Science at Florida State University, Tallahassee, recently received a grant to study the species. According to Dr. Heard, relatively little is known about this clam in the U.S. He says, "As in the case of many introduced organisms, there are evidently no effective control systems, and the populations become immense.

"Animals of this species have been found to clog intake screens in water treatment and power generating plants, and are also a serious problem in the sand and gravel industry. It has been reported that clams contained in river gravel used for concrete aggregate move toward the surface, leaving gaps in the setting concrete, which results in an unstable product.

"In addition," says Dr. Heard, "these exotics are in competition with our native clams for food and space, and may soon seriously reduce our original fauna, many species of which are very localized in distribution, sometimes being found only in a single river."

The problem is severe enough to rate a mention in the annual progress report of the Florida Game and Fresh Water Fish Commission for the year 1969–70. It reads:

"*Corbicula manilensis* has clear numerical dominance over all other organisms at all (sample) stations except for an isolated instance occurring at station 2 (near Chattahoochee) during the third quarter of 1969."

In seeking information about the clam in other parts of the U.S., Dr. Heard found that in 1961 the Tennessee Stream Pollution Control Board, a division of the Tennessee Department of Public Health, published a summary of information on the Asiatic clam population. But still, at this stage, very little is known of the biology of the clam—how it is fertilized, how often it reproduces, its life span, and similar data.

Dr. Heard will study ecological aspects of a population of the species and details of its reproduction. He will make field observations and collect clams of different sizes and ages each month for a full year to provide seasonal information on such features as the age of the organism at sexual maturity, the season or seasons of fertilization, whether self-fertilization occurs (the animals are hermaphrodites), the duration of incubation (they are live-bearers, releasing a larval stage), the number of larvae per brood, and the number of broods produced per year. It is hoped that the findings will provide information of use in subsequent studies on control and harvest of *Corbicula* clams wherever they occur.

Dr. Heard came to Florida State University from the University of Michigan in 1962. He received his bachelors, masters, and doctoral degrees from UM.

Recently, he returned from a year in Thailand, where he was studying snails associated with human diseases in the Mekong River drainage. In June, he left for eastern Africa for a three months' study of the same subject.

In the meantime, while preparing for the study of *Corbicula manilensis,* he became curious as to whether or not the clam had potential as food for Americans. He says it has been used on a small scale in the U.S. as a fish bait and as food for ducks. (In Taiwan, ducks fed on these clams are said to taste better, but the clams themselves are considered the real delicacy.)

To Dr. Heard's knowledge, the Asiatic clams had not been eaten in Florida. So a cooking demonstration by Lucy Ho, from Taiwan, owner of Lucy Ho's Bamboo Garden in Tallahassee, and Roseli Ocampo-Paus, from the Philippines, now studying

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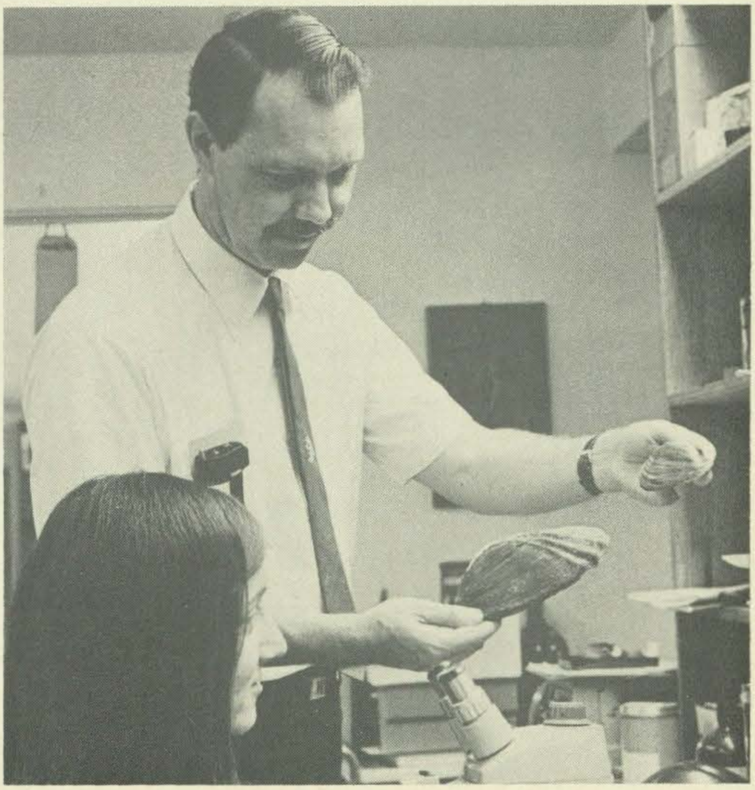
By SABINE EHLERS

Photos By Wallace Hughes



Shiny shells of edible Asiatic clam, left, show pale, smooth interior and the distinct black ridges of the outer surface. Native fresh water clams do not have ridges and should not be harvested. Dr. Heard, right, and his lab assistant Virginia Vail examine two fresh water clams endangered by invasion of foreign clams.

(*Continued from preceding page*)

at Florida State, was arranged. Several Americans were also invited to sample the culinary efforts of the Asian cooks.

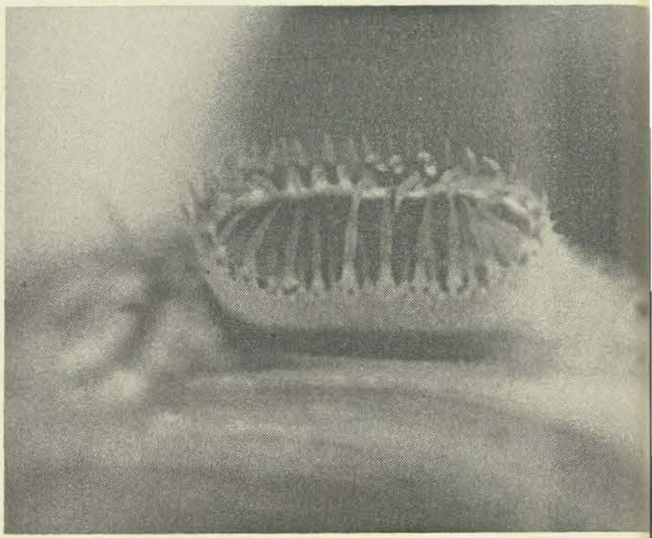
Lucy Ho was delighted to know the clams, so common in her native land, were actually available in Florida. She had given up hope of finding them, and said, "Several of our choice dishes are made with this common clam. I must have some for my restaurant."

Roseli Ocampo-Paus was also acquainted with the clam, noting from its species, *manilensis*, it may have first been described near her home city, Manila. At any rate, she had cooked it many times and hoped the assembled Americans would enjoy the dishes.

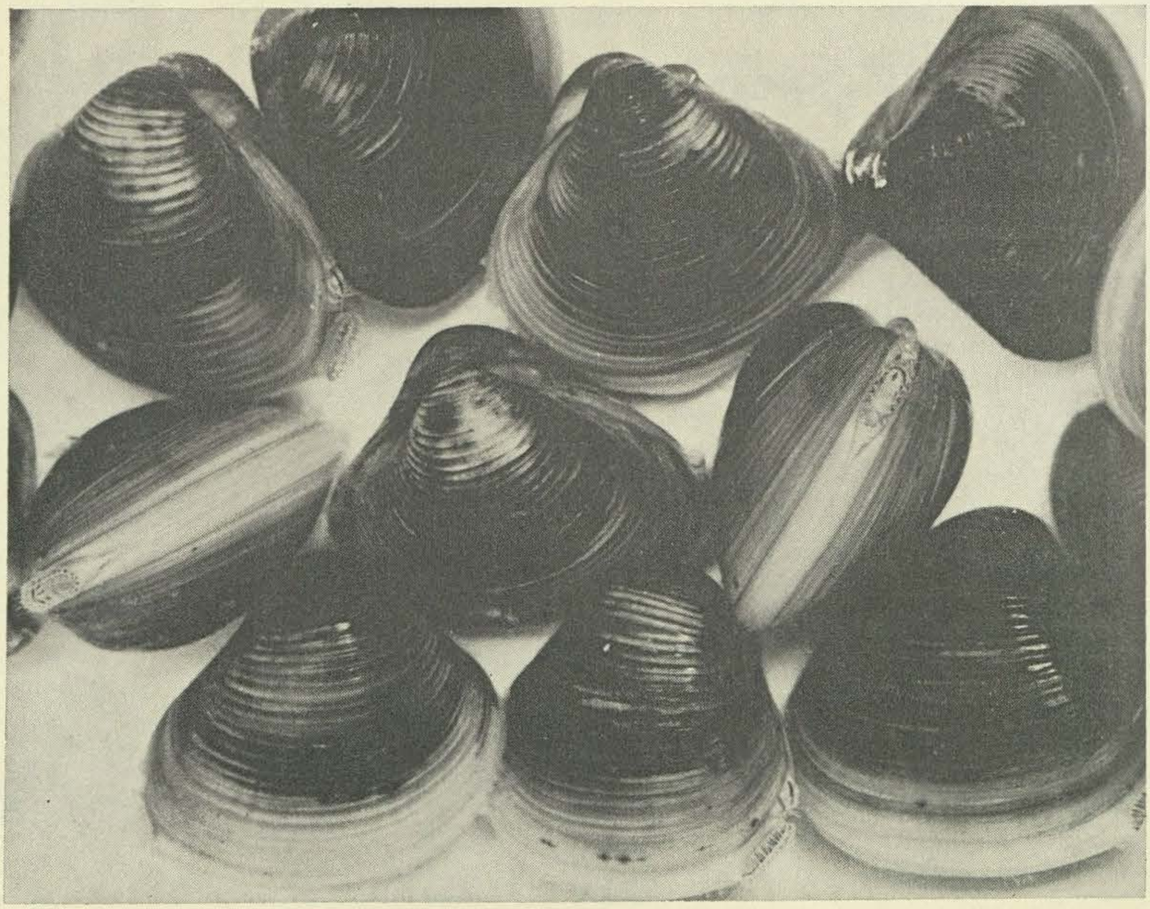
The ladies prepared one dish each. Mrs. Ocampo-Paus made a delicious chowder, and Lucy Ho contributed a tasty vegetable and clam dish. The demonstration was a decided success, according to Dr. Heard. Several of the Americans, after tasting the clam dishes, suggested that perhaps these clams could be harvested and sold to restaurants, fish markets, supermarkets, and also that they might serve as a recreational activity for people who enjoy clamming.

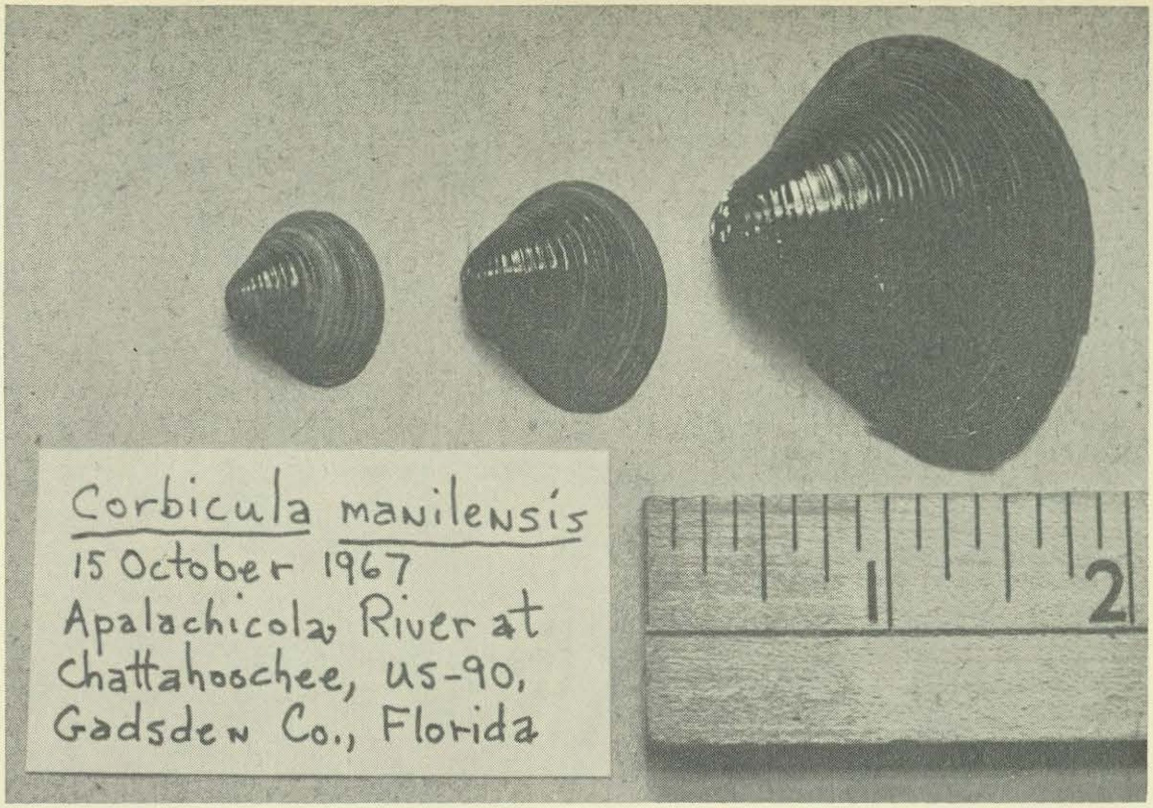
Further investigation of the possible use of the imported clam as food for Americans was carried out by Dr. D. M. Stallcup, director of the Food Laboratory for the Florida Department of Agriculture and Consumer Services. His lab people analyzed the clam for food content, finding the moisture content 82.1 percent, and protein, 9.2 percent.

The clams analyzed came from Lake Talquin. They were collected at Coe's Landing, off State Road 20, near the public fishing pier. In checking the organisms for pesticide residue, the lab analysis showed just a trace. The water in the Chattahoochee River, from which larger specimens of *Corbicula* clams were dug by Lucy Ho and some



Photos By Wallace Hughes





Clams are all plankton feeders. They take in food-bearing water through an opening called a siphon, left, and expel water and waste through a smaller one. Asiatic clams have spread rapidly in northwest Florida since 1960 discovery.

friends the week following the cooking experiment, was also at safe levels, according to Dr. Stallcup.

Vernon Keys, shellfish consultant for the Division of Health, Florida Department of Health and Rehabilitative Services, suggests that any person or group who contemplates harvesting and eating these clams in Florida waters call their local Board of Health to arrange a check of the waters in which they plan to clam. Keys also points out that although the water may be safe one week, pesticide contamination or other types of pollution could well make it unsafe the following week. Therefore, as with any fish or shellfish, people will gather and eat these clams at their own risk.

Dr. Heard cautioned that "the clams could serve as a source of hepatitis if eaten raw," and expressed the hope that no native clams will be collected. Several of them are rare and already endangered by the spread of the Asiatic clam, he noted.

Members of Dr. Stallcup's laboratory staff also steamed the clams, as salt water clams are steamed, and found that "they shrank terrifically and had a peculiar taste." These were cooked without any seasoning. Then they tried covering the clams with batter and frying them, and found the taste "acceptable to us," said Dr. Stallcup. The clams in both instances were tender and not tough like the native species of fresh water clams.

As many as 100 of these clams are needed for a recipe to serve four to six persons, but according to Dr. Heard, they are so abundant in our fresh waters that the necessary amount is easily obtained. The clams should be kept alive in clean water for at least a day after collection. This will allow sand and grit normally present in the digestive tract to pass from the animals.

According to Dr. Heard, *Corbicula manilensis* can be found near the banks of the following river systems, and can be readily collected by hand if the water levels are sufficiently low: Escambia, Choctawhatchee, Apalachicola, Ochlockonee, Suwannee, Withlacoochee, and the St. Johns. They are also to be found in some lakes and reservoirs in those areas.

The Asiatic clam can be recognized in the water by the two small siphons that protrude from the posterior end of the animal and form holes in the substrate. Microscopic food particles in the water enter the larger ventral siphon and are trapped by mucous on the gills. The food is then transported along a groove to the internal mouth, from which it passes through the digestive system. The waste products leave the animal with the water exiting through the smaller dorsal siphon. "It is not unusual to see an area pock-marked with these siphons showing in the bottom, sometimes only an inch or so apart. With the clam buried just below the surface, it is easy to poke around with a finger,

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squeeze, and pull out the clam. But either wear gloves, or be careful not to prod around too much with the bare hand since glass or other sharp debris may be buried near the clam, causing injury to the hand," cautions Dr. Heard.

Lucy Ho suggests that not only gloves be worn, but some foot covering—also for safety reasons. A member of her party cut his foot on some glass buried under a loose layer of sand.

Whether or not man will become a predator of the introduced Asiatic clam in Florida, Dr. Heard knows that a way must be found to control this fauna if the native clams, and there are about 40 species, are to survive.

The recipes below were prepared by Mrs. Ocampo-Paus and Mrs. Lucy Ho. They are very simple, and the ingredients are readily available in most large markets. Although fresh ginger is specified in the recipes, powdered ginger can be used. Because the clams are not especially flavorful, some members of the group involved in the experiment who had tested the Oriental and the more traditional American method of preparing the clams, found the Oriental way preferable. The clams are sweet and tender, but need the extra flavoring to make them really delicious.

Clear Clam Soup with Corn

1 cup shelled clams
5 cloves of garlic
5 ears of corn
1 onion (medium and finely chopped)
1½ cups of water
Salt and pepper to taste

Heat oil in a sauce pan. Brown garlic and onion. Set aside. Pour boiling water over clams until they pop open, as in recipe above. Shell clams and set meat aside. With a sharp knife cut through the corn grains, starting from the base of the corn ear to the tip until all the corn is cleaned off the cob. (Canned niblets may be used, but fresh corn gives a better taste.) Add clam meat and corn to fried garlic and onions. Add the water. Bring to a boil. Add salt and pepper to taste. Serve hot. Serves 4.

Clam and Vegetable

40–50 clams (soaked live all day and overnight)
2 stalks of celery (or 1 small can of bamboo shoots, or 1 small can of water chestnuts, or 1/3 bunch of fresh asparagus) all vegetables cut into bite size pieces
1 piece of ginger (thumb size, chopped)
½ tsp. of garlic
1 tbsp. Kikkoman soy sauce
1 tsp. lemon juice or vinegar
1 tsp. sugar
1 tsp. corn starch
2 tbsps. water

Sauté ginger, garlic and vegetables in hot oil over high heat until vegetable is slightly soft, but still crisp. Do not overcook. Add clams in shells and sauté until shells open. Remove shells. Mix lemon juice or vinegar with soy sauce, sugar, corn starch and water. Add to clam and vegetable mixture to make gravy. Serves 4.

Clam Chowder

50–60 clams—soaked in water one full day and overnight
1 piece of fresh ginger (thumb size, crushed)
1 tsp. butter or cooking oil
6 cloves of garlic (crushed)
1 medium-size onion (finely chopped)
1 tomato
½ cup "sweet rice" (a sticky rice found in health food stores), or 1 cup cubed potatoes
1 cup water
Pepper and salt to taste

Melt butter or oil in a skillet; fry garlic, onion and ginger until brown. Pour in 1 cup water, and bring to a fast boil. Add the clams and continue boiling until clam shells pop open. If desired, the shells can be removed, or left until ready to serve. While broth is still boiling, add rice or potatoes. Cook over low heat until rice mixture gets thick, or potatoes are tender. Add more water if rice gets too thick. Season with salt and pepper. Optional: Fish sauce may be used instead of salt, and young pepper leaves may be added for more piquant flavor. Serve hot. Makes 4–6 servings.

Clam Omelet

2 cups of shelled clams (about 80 or 90, if smaller variety)
1 medium-size onion
2 tomatoes
1 egg
6 cloves of garlic (crushed)
1 tsp. black pepper
½ tsp. paprika
Cooking oil

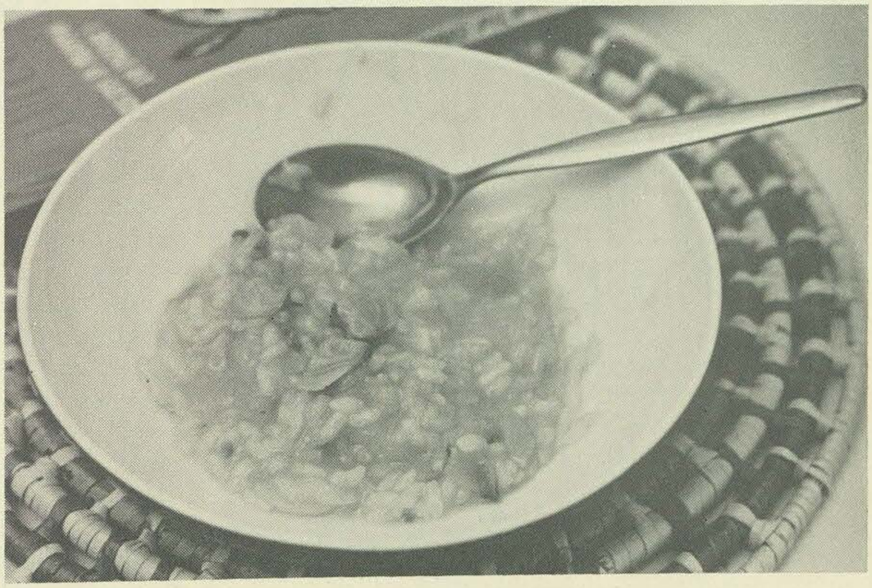
Soak clams as for all other recipes. Pour boiling water over clams and soak in boiling water until shells pop open. Shell clams, and set aside. Heat oil in a skillet. Season with salt and pepper. Cook for 5–7 minutes on medium heat. Meanwhile, beat 1 egg. Mix the clam mixture with the egg, and fry in individual serving portions, as in egg foo yong. Makes 4–5 servings.

Clam Consommé

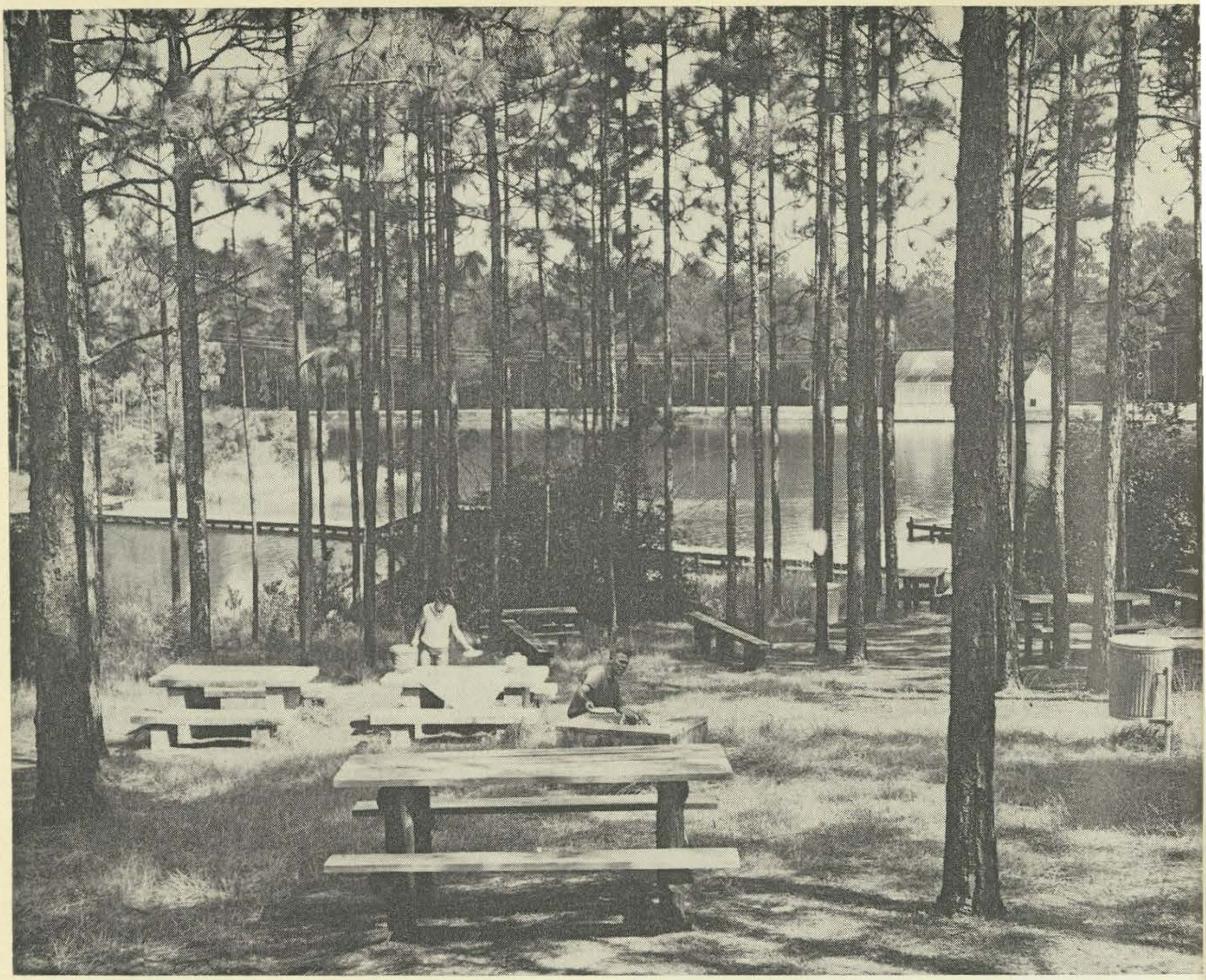
40 clams (Soak live in water all day and overnight)
1 tsp. ginger (cut fine)
4 cups water
½ tsp. salt
Watercress (a few sprigs)

Bring water to a boil. Add clams with shells until shells pop open. Remove shells and cook 2 or 3 minutes. Do not overcook. Add watercress for color. Serves 4. ●

Photos By Wallace Hughes



Dining on clams gathered near Tallahassee, left, are Lucy Ho and Dr. Heard. Steamed clams in celery sauce, above, is a dandy dish. The well-seasoned, dainty meats are served with rice, right. Clams are tender, not rubbery like other fresh water clams.



Division of Forestry Photo

—State Forests— Something For Everybody

No one has just suddenly discovered that forests are an esthetic resource. Chekhov, the Russian playwright and author, said, "If in a thousand years people are happy, it may be because of forests that were planted here." Foresters and others since the days of Teddy Roosevelt instituted a policy of using public forests "to provide the greatest benefit for the largest number of people." The concept came to be called *multiple use.*

This doesn't mean that peace and harmony have always been the result. The greater the competing demands on any forest lands, the less real land there is available for commercial timber. Originally, the forests were cultivated to produce an income and help replenish our fast-disappearing wood resources. Timber still is the single most important product.

But the real benefit, today's foresters realize, may be from another value forests have: their value as *greenspaces,* not merely for hunting and camping, but for other outdoor pursuits that have a way of helping us regain perspective away from the everyday grind.

Therefore, you can canter free along mazes of bridle trails, both marked and unmarked, at Blackwater River State Forest and explore the Red Ground Hiking Trail, a famous route taken through that area by Andrew Jackson.

At Withlacoochee State Forest there are, besides riding stables, large-scale recreation areas for group activities near Silver Lake; and motorcycles are welcome in a special area.

At tiny Cary State Forest near Jacksonville, the first of several Environmental Education Centers is getting ready for use by children and nature lovers.

State forest lands in Florida total approximately

310,000 acres in four forests. Blackwater, located in Okaloosa and Santa Rosa counties, contains 185,000 acres. Pine Log State Forest has 7,000 acres and is in Bay and Washington counties. There are just 3,400 acres in Cary State Forest in Duval County. And Withlacoochee State Forest, with 116,000 acres, is located in portions of Citrus, Hernando, Sumter, and Pasco counties.

As with private holdings which are reportable to the stockholders, state forest lands are reportable to the citizens of the State of Florida, and the Division's policy on these lands has been "to provide the greatest benefit for the largest number of people over the longest period of time."

In arriving at this objective we have been required to manage each forest differently, and I refer primarily to the two largest state forests, Blackwater River and Withlacoochee.

On Blackwater River State Forest we are managing primarily for timber, recreation, and wildlife, in that order. The reason for this is that we feel the need for recreation areas is not as critical as in other places in Florida, and that there is less public pressure for hunting on Blackwater than in other areas of the State. Therefore, our primary effort is devoted to the timber resources. We take in approximately $1,000,000 each year on this piece of public property.

The recreation facilities currently provided at Blackwater River State Forest are more than adequate to meet the needs of the users—camping, swimming, picnicking, fish ponds, hiking trails, and horseback trails are all there. A Division of Forestry long-range project is to construct an environmental education center there similar to the one that is to open soon at Cary State Forest.

The wildlife on Blackwater is managed by the Florida Game and Fresh Water Fish Commission with assistance from the Division of Forestry. There are many areas in this part of the State where the hunter has access, so it is not necessary, at this time, to intensively manage Blackwater Forest for hunting purposes. We are currently moving to include the entire forest in the Commission's statewide wildlife management area system, however.

There are approximately 2 million people located within a 100-mile radius of the Withlacoochee State Forest. The demands are just the reverse of those in Blackwater Forest. Approximately 60,000 acres of the Withlacoochee's 116,000 are in deep sand hill land, scrub oak and live oak, and longleaf pine timber. We have a seed crop once every 7 to 10 years in the longleaf, so the natural production is not readily available.

Clearing and planting slash pine stand conversion has not proven economically practical, therefore, we made the decision that to manage these lands for timber purposes would not be in the best public interest; that the sand hill and scrub lands would be more practical and of more benefit if managed as a wildlife and recreation area. This is the direction in which we have gone.

We are intensively managing for timber approximately 40,000 acres in the Richloam Tract of the Withlacoochee Forest, which has a low recreation appeal. However, we are leaving open areas and pond margins for wildlife. As the need increases, I can foresee that we will practice less and less forestry here and turn to more and more emphasis on recreation and wildlife.

One of the problems in the central part of the State is that there is little public land available. For a fact, one can drive several hundred miles through this part of Florida without being able

(Continued on next page)

By W. R. HELM, JR.

Florida Division of Forestry

Photo By William Greer

Use of forests for recreation—all kinds—is increasing in proportion to population explosion. Florida's growth rate, some 3,000 new residents per week, is highest in country. Wildlife must be planned for too, and State foresters are increasing emphasis on planting and leaving food-producing trees for deer, turkeys, squirrels, and other wild animals.

Division of Forestry Photo

Timber production for the market is still the main concern in state forests, but the multiple-use concept is coming to the fore. For example, the Butchenbaugh Mines tract in Withlacoochee State Forest is for off-the-road motorcyclists of all ages. There, they won't disturb hunters or birdwatchers or endanger themselves in highway traffic.

(Continued from preceding page)

to turn off the highway and ride into the woods for fear of being prosecuted for trespassing.

We are experiencing the same problems as the Ocala National Forest: the problem of an influx of people. We have elected to put the land where it would benefit the most, and, at the present time it seems to be going in the area of recreation. On both state forests last year, we had approximately 400,000 visitors for day use and 29,000 paying overnight campers.

One specific problem I would like to elaborate on is the matter of motorcycles—and where to ride them. From what I have read and heard, this is not a unique problem with any land management agency in the United States. We all share it. There are simply more and more motorcycles coming into use every day. For example, for every four automobiles sold in the country today, there is one motorcycle sold—and Florida is number two in 'cycle sales.

These are mothers and fathers and children who need a place to get away. On Withlacoochee we are fortunate—or unfortunate, as the case may be—to have some old abandoned phosphate pits which were mined out in the early 1940's. Such a site has a natural attraction for motorcyclists. It is all uphill and downhill, and it's away from the press of normal highway traffic.

In 1965 we began getting considerable usage of this area, and it built up to a point where it was obvious some action needed to be taken. We held a public meeting in the summer of 1971 at the courthouse in Brooksville so the general public might have an opportunity to express their views and give us some suggested solutions.

Some 500 to 600 people showed up for the hearing, jamming into a courtroom that seats 200. About 95% of them were motorcyclists begging and pleading for a place they could have, similar to what hunters had in the management areas, where they could ride their motorcycles without fear of prosecution.

This, they reiterated, was something the entire family could do together, especially if there were teenagers in that family. One mother told me it was the only medium she and her husband had through which they could communicate with their teenage son—they all enjoyed riding together at every opportunity. It was one of a number of outdoor things the whole family could do together.

There were many suggestions and proposals. We finally determined there was, in fact, a need, and that we should provide a place for these people. We laid out 2,600 acres in the area surrounding the old phosphate pits for use by the mortorcyclists. We had studied the problems of most of the states and the major parks and decided the only way to handle the where-to-ride-the-motorcycles problem was to confine and regulate the activity.

To the best of my personal knowledge, and from what I am told by the cyclists themselves, this is the only public area in the U.S. that has been assigned for the use of motorcyclists. They have access to other public lands, but often without specific permission. They are simply using the areas more or less at their own risk.

The Division of Forestry further elected to provide campsites, showers, sanitary facilities, an activity shelter, and a sewage treatment plant. In addition to this, some areas were laid out for novice riders and youngsters so they might have a place to train.

This is not an area for the exclusive use of motorcyclists. Hunters, in season, and fishermen and campers may also use it. The cyclists primarily use it on weekends.

One of the problems the Division faced was jurisdictional in nature. There was the question of whether or not youngsters under the minimum age for obtaining a restricted drivers license in Florida (15 years old) could operate motorbikes or 'cycles in the designated area of the Withlacoochee, or on other forest lands, for that matter. We were fortunate to get legislation passed in the 1972 session of the Legislature authorizing the setting aside of areas on forest lands for use by recreational vehicles; the controlling of all modes of transportation into, in, and out of state forests; and providing for the lawful use of motor vehicles such as 'bikes and 'cycles "which need not be licensed or operated by licensed drivers." (General Law 72-246, Section 589.071, Florida Statutes, effective July 1, 1972.)

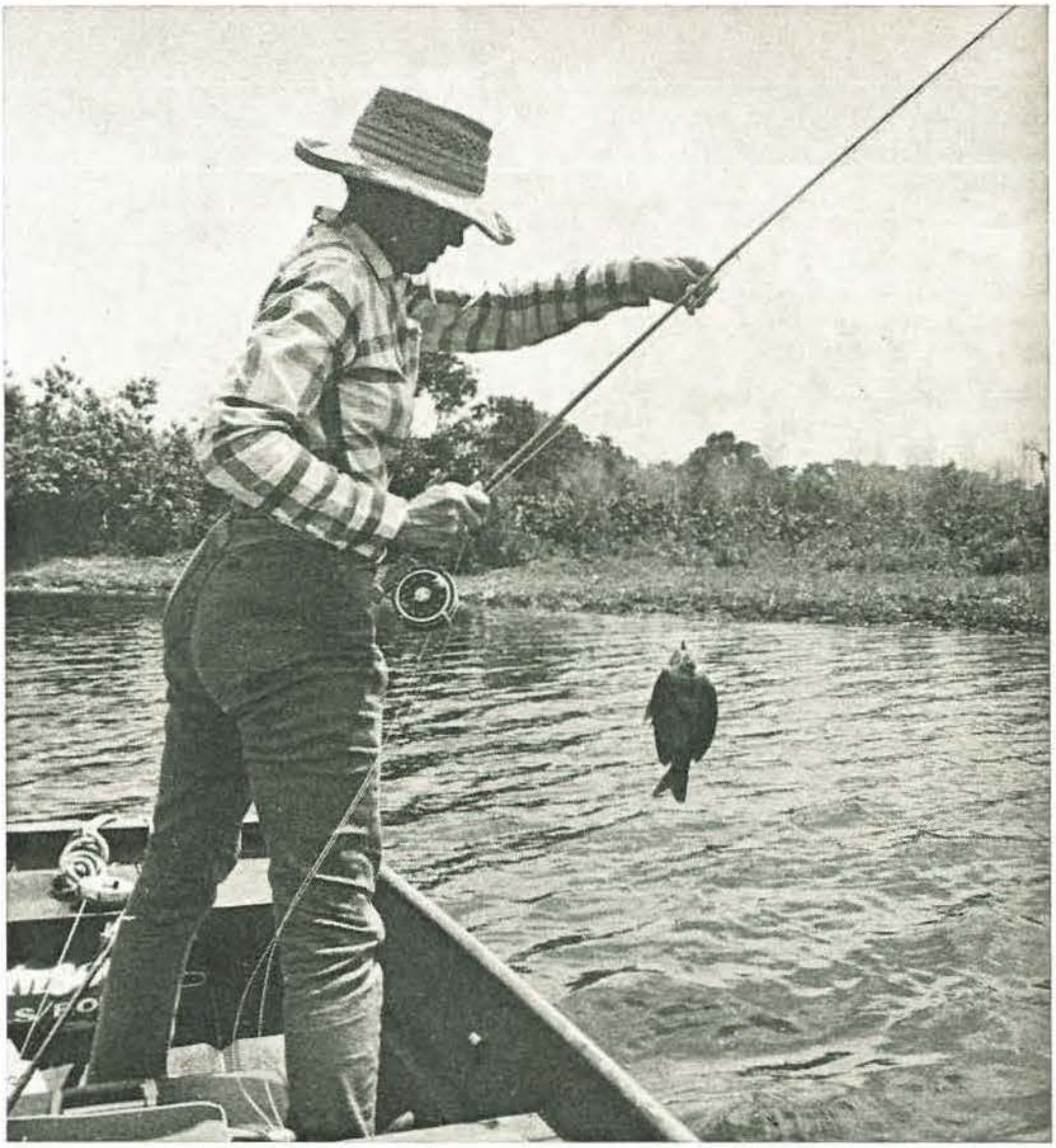
Photo By Gene Smith

In order to finance the project, and with the concurrence of the motorcyclists, we charge them $12.00 each year, or the equivalent of $1.00 each month for a permit for the use of this area. The Division anticipates it can take in from $20,000 to $40,000 a year from the use of the designated area by motorcyclists. There are approximately 5,000 to 6,000 people using it one or more times a year. At the same time, we prohibit the use of 'cycles on one entire tract—Citrus—because the vegetative cover and soil type simply could not stand the traffic. This was a further effort to control the use of motorcycles.

I am not certain this is *the* answer, but it is *an* answer. I don't think anyone has *the* answer to the problem of motorcycles as they relate to the multiple-use concept of public land management. The Division feels that with certain controls and restrictions, these increasingly popular recreational vehicles do have a place on the state forests of Florida. The key seems to be *regulation.* ●

Division of Forestry Photo

SUMMER FISHING



Photos By Charles Waterman

YOU CAN CATCH a million fish, yet there will be some that stand out in your memory, not necessarily because they are bigger than the others, but because the circumstances were a little unusual, the scenery different, the way you felt something special at the time. If I am willing to tell you all I know about hot weather fish, you should be willing to bear with me through a little nostalgia. Fair enough?

This was 35 years ago and I was a newspaper reporter who spent some of my work time writing a column about hunting and fishing and most of my off-work time fishing or hunting. But in those days no newspaper publisher was going to pay any clown for going fishing. The fishing column material had to be drawn from extracurricular experiences and then typed up when there was a lull between obituaries and lodge initiations. My salary was $15 a week and a lot of people envied me because those were hard times, as you may have heard.

About 20 miles from the newspaper office was a small lake with all sorts of underwater growth so thick it was hard to wade, and a fringe of trees around the shore, some of them fallen over and rotting. On every evening I could get away from my work (the publisher kept explaining to me that a newspaper reporter's job is 24 hours a day) I'd go over to the little lake, paddle out in a flat-bottomed boat, and cast popping bugs and wet flies around the border of that pond. I fished the same stretches over and over again, sometimes coming up with a pair of bass as the summer sun got low. I don't recall catching one in hot weather when the sun was much above the trees, even though there was plenty of shade down under the weeds that were gradually choking the lake. But I'd always fish as soon as I could get there, beginning at 5 o'clock sometimes. It was around 7 p.m. before the bass seemed to get active. Before that, I'd often catch bluegills on wet flies worked slowly around the downed trees.

It was pretty hard to arrange to fish that pond in early morning because I was due at work at 7:30 a.m. on weekdays, and the pond would be crowded on weekends. But on one day a week I drove past it in a car belonging to the newspaper on my way to a village where I picked up items about church socials and Farm Bureau meetings. Through some since-forgotten chicanery I checked out the 1935 Ford before daylight one morning and furtively slipped my tackle and fishing clothes into the trunk, managing to arrive at the lake when it was dawn-gray and flat calm. The day would be another scorcher. I unlocked the little boat and paddled silently toward an old log that stuck one rotting arm above a patch of lily pads.

I won't go into details of the battle, but the bug was a thing we called a Dragon Fly, made of deer hair and balsa, and hard to cast because it tended to twist the leader. The rod was bamboo and 9 feet long. It was pretty heavy, but I still have it and it throws an eight line pretty well. The old Bristol fly reel is long gone. It was a level line and the leader was gut, of course.

Anyway, the frogs began to taper off the way they do in early morning, the crows had begun to leave the roost, and a little green heron slid into his morning feeding spot as I got close to the old tree.

I began working along where I knew the log ran under the water, and the bass came up slow and then chugged the bug, splattered along the surface when I worked him hard, and dug for the old log. He was the biggest fly-rod bass I'd caught up to that time, and I slid the little net under him carefully and left him lying in it without scooping him up, the yellow and white Dragon Fly sticking from one corner of his jaw. I put him back and dipped the paddle into the water with the bow headed for the muddy landing spot.

By that time the sun was just showing over the horizon, a bright red curve that seemed to jump out the rest of the way and turned to glaring yellow as another hot day began. I slipped out of my fishing clothes and put on my work clothes and necktie. The whole thing is very easy to remember.

Twenty years later I had a look at the pond, but it was pretty well filled in and they told me there wasn't much fishing there. Anyway, dawn is likely to locate fish you'd never see at any other time, providing it's hot weather.

Four things cause most fresh water fish to be most active during early morning, late evening, and at night during hot weather. First is the water temperature, which is most likely to be lower when the sun is low or invisible. Next, there's the chance to feed when the light isn't too bright. Third is the prevalence of more food on the move, especially in late evening and early morning. The fourth factor is one

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By CHARLES WATERMAN

Big bluegills, left, commonly feed in the shallows during summer evenings, and often remain active later than bass. Fish for them around the edges of a lake or pond, keeping a look out for beds, which may be found in south Florida at any time of year. Late afternoon to "first dark" is a good time for bass fishing in hot weather, below. A gentle wind to cool the angler and turn up bonnets might aid fishing.

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that grows with the human population and is a simple matter of fewer people being on the move over fishing waters during hours of dark and dusk.

Early in the spring or late in the fall, you'll generally find a thermometer a help in locating the warmest part of a lake or river. In midsummer you'll need it to locate the coolest part. From, say, April 1 to October 15, temperature isn't much of a problem in Florida since the fish can find suitable temperatures nearly everywhere.

When water temperature gets into the high 80's, bass get sluggish and reduce their feeding. When it gets down into the 50's, the same thing happens. Fish living in water that's too cold for their comfort experience a slowup of all bodily functions. They digest slowly and they grow slowly, if at all. When the water's too warm they become lazy and don't require as much nourishment as they do when they're active.

In most deep impoundments of the South, there's always a depth at which fish are happy and can be located. If the water is shallow, as it is in most Florida lakes, a fish has no place to go as far as depth is concerned, so he just finds the deepest shade he can and stays put. When he gets a cloudy day, or the sun goes down, he comes out and looks for something to eat.

There's a good reason why a black bass rattles his food chain in the late evening. That's when insects come out, and even though they may be too small to interest the bass, they interest little fish that do interest bass. I'd like to say the bass fishing is better the later it gets in the evening right up until dark, but I haven't found it that way. I've found that bluegills feed later than bass and that bass fishing often slows up just after sundown, possibly to begin again late at night. This one explodes all of my theories and all I can guess is that feeding bass get all they want temporarily and then loaf for a while. This late evening pause is no hard and fast rule. I've caught plenty of fish when you could only hear the splash off there in the gathering dark. If I were on the scene I'd stay until nightfall.

Nearly all lures used for hot weather bass should be operated slowly. About the only exceptions I've found are the weedless spoons and wigglers yanked at high speed through thick grass, and I think they'd probably work better if you could make them go slowly and still keep them from sinking. Warm water bass seldom have quite the steam of the fish from cooler water, but it seems to be a matter of individual fish.

Where the water's shallow, wading is often more productive than boat fishing on warm evenings or mornings. The theory's simple—a matter of the fish being on the move rather than resting beside obstacles. The wading fisherman goes very slowly and may stand in one spot for quite a while waiting for the fish to come to him, which they often do, and, whether he's using a plastic worm or a surface plug, he may get a strike on the dozenth cast to a given area. Moving bass are likely to see a boat or hear feet on its bottom when the water's shallow. In late evening, bass may prowl into sectors no more than a foot deep. Any time you have fish in water that thin, you'd better move cautiously.

Now get the picture: Instead of moving along a shoreline or an underwater obstruction, you're waiting for the fish to come to you—to some extent at least. Theoretically, such fish should already be out from under their cover and, therefore, shouldn't need much of a disturbance to attract their attention. But that's cutting it pretty fine. I've known plenty of late evening bass who liked something that kicked up a rumpus. A loud lure needn't be moved fast.

I believe the colors of surface lures become less important as night comes on. When there's no sun on the subject, color begins to be lost and as darkness comes on I think it appears as simply something, generally dark in outline, against the sky. That's the supporting theory for the all-black surface plug. It shows up plainer against a lighter sky. I have never decided how important that is, though. I think the fish can see it anyway.

Cloudy days beat the sunny ones when it's hot. A really rainy day can be good, although I haven't done well when there have been electrical storms—a time when you shouldn't be on the water anyway. A gentle summer drizzle can be fine in hot weather. The theory that fish bite best just before a rain may be tied to barometer reactions, but it can also be attributed to the cool shade of rain clouds. There's the theory that an approaching storm can stir up fish in anticipation of all the bait that will be moving when the river rises or the run-ins commence along the lake shore. When they quit striking just before a storm you can always say they're afraid of lightning.

Fish for bass near a run-in or small stream entering lake, as in this arm of Lake Okeechobee, left. Moving water has lots of natural food and attracts fish. Chumming with live bait, below, can stir up schooling bass and add to the fun.

Photos By Charles Waterman

Now *after* a good rain there are all sorts of reasons for extra activity, especially in the shallows. The rain cools off the edges, starts small creeks moving, and washes bait in from everywhere, especially if it's been dry for a while. If the water actually rises appreciably it can cover new ground and new food.

In summer, the edges of various kinds of cover are even more important than in cooler weather, especially at morning and evening. If a fish lives in deeper and cooler water during the heat of the day and spends evening hours in the shallows, there's a time when he's going to be "in between" and on the move before scattering to his nighttime habitat. So as the sun sinks, you'll do well to consider the area between deep and shallow water. There should be more of a concentration there.

There's another factor in moving water, especially shallow places. When bass are found in relatively fast, shallow current in hot weather there's a tendency to feel they're violating all the rules, for they're in the sun and generally some distance from solid protection. The answer is that moving water is better aerated than still water, and that warm fish need aeration. Fish in moving water are usually more active than those in quiet places, partly because they have the habit of moving to overcome the current, partly because they're living in more oxygen. It's no hard and fast rule, but the larger black bass stay in quieter water most of the time, and the more active ones in the rapids.

School bass are often at their best in summer, and you can divide them into two rough classifications—those which are waiting for bait and those which are chasing it. In lakes, the fish usually chase the bait; in rivers, they wait for it. So, if you know where they've been coming up in a stream, just anchor and wait for things to begin. On a lake, you generally have to do some chasing. Nearly all school fishing is boat fishing.

Last summer I got up before daylight, fumbled my boat into motion, and motored to an old schooling spot I hadn't visited for 10 years. It was no hunch, just curiosity, for the river bottom might have changed since I'd been there and the schoolers could have abandoned the place. But, sure enough, as I cut the motor and drifted to what appeared a suitable anchoring spot, there was another boat ahead of me, a little vague in the dawn light. One of the occupants seemed a little familiar and a few tentative greetings revealed he was a guy I hadn't seen for 10 years. He was anchored within 10 feet of where I'd seen him last a decade prior, and I assume he'd been stopping there every summer since.

The two guys in the other boat rigged their spin-

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ning rods, faced expectantly in the same direction, and made a couple of tentative casts to get things straightened out. There was a bar running into the river at that point, a bottom feature that caused any school of bait to be pushed up toward the surface, and possibly to mill uncertainly.

Just at sunup, a single minnow skipped out of the water, followed by a series of swirls, and several school bass began banging the surface. The plugs dropped among them and each of the fellows in the other boat was fast to a fish. Me? I had a backlash. I was a little out of practice, I guess. But they had the best position anyway. So I watched the school bass work—fish many generations removed from the last ones I'd seen there.

A little after 7 o'clock that morning there was a stream of fishermen going out to other places, coming from several fish camps within three or four miles of where we sat bobbing in their wakes.

"Well, that's it for today," said my acquaintance in the other boat. So they pulled up the anchor and left. I sat there for another half hour, but nothing further happened so I went in myself. As far as I know, none of the other fishermen who had scattered over the area even knew about schooling bass.

Early morning is nearly always best for schoolers. If there's much schooling at night, I never heard of it. I can't say I've seen much evening schooling either, but undoubtedly there is some on waters I don't know about. If schoolers all went by strict rules, everybody would catch them.

There are a couple of school bass tricks that have come along in recent years. One is the business of fishing the bottom under known schooling areas, and this generally accounts for the bigger fish. Plastic worms have been highly successful at that business, but weighted bucktails, slow-worked little spoons, and live bait have taken their share of the loafers that seem to be waiting for scraps from the faster, smaller fish. Some say the bigger fish that stay deep most of the time are waiting for one of the smaller strikers to become careless, and undoubtedly a big bass will grab a little one. On the other hand, a scattered school of bait may do some erratic things, and there are confused baitfish near the bottom after the rally.

Some years back, the St. Johns River guides adopted a practice of chumming school bass. They'd get just a few feet upstream from where the fish could be expected to come up, release a few handfuls of bait, and wait for their artificial schooling. It works. When the fish are coming up and seem to have lost most of their caution in competition for the chum, the guides slip a hook into a baitfish, slide it down with the free swimmers, brace their feet, and tell their customers to brace theirs. There are times when it will work all day, I guess, but it's largely an early morning procedure.

Most school bass fishermen don't talk much about it. There are too many fishermen around for that. But if you want to cruise around at dawn you can probably locate some good summer schooling grounds.

Anywhere you go, the most successful summer fishermen keep special hours. Down on Alligator Alley, the highway that cuts between Ft. Lauderdale and Naples, there are some dawn fishermen who do their casting early and get to work on time.

I don't suppose the dawn operations are going to get very crowded. Fellow asked me the other day when was the best time to catch bass in hot weather. I told him the best way was to get up well before dawn and get out there at first light.

"Well," he said. "That eliminates that. What's the second best time?" ●

Photo By Charles Waterman

The best thing about bass fishing is that it's often predictable while at the same time full of surprises. A rainy day often means bass will nab surface lures even at noon during the summer. Also, the fishing, usually best just after sunset, may last far into the night—when the angler can only hear and feel the fight—not see it.

Gun Care

during the summer when it's hot and humid, it becomes important for guns to be carefully inspected and cleaned, and kept in good working condition

By **EDMUND McLAURIN**

For shooters who live close to the water, especially the seashore, gun bore maintenance can sometimes be demanding despite modern aids.

Dampness, often made more pronounced by sudden temperature changes in a predominantly humid climate, is the villain here in Florida. At certain times of the year, unprotected firearms can rust quickly, sometimes seemingly overnight!

It was even worse in the days of ammunition that contained corrosive priming mixture. Then, average gun barrel life was relatively short if fouled barrels were left uncleaned for even a few days—particularly so for .22's.

Efficient bore cleaners and reliable barrel preservatives were few, too. Most shooters then depended on Hoppe's No. 9 for bore cleaning, and one or two national brand oils and greases for preservation.

Water, "the universal solvent," the one that can gradually wash away the Earth's hardest rock formations, was then one of the best cleaning agents firearms users could turn to after firing corrosive primer-type ammunition.

It was once common practice to place a rifle muzzle in a jar of hot sudsy water, frequently with a little ammonia added, then to pump the solution in and out of the bore by alternately pulling and pushing a cleaning rod and tight-fitting patch along the length of the barrel to dissolve the potassium chlorate deposits inside.

I kept the bore of a Springfield National Match .30–06 bolt-action rifle in perfect condition for years by unfailingly cleaning it with hot water after each day's use. My method was simple, but it worked.

I even fashioned a rifle-holding cradle from a wooden ammunition box by cutting V-notches at each end, and designed a tight-fitting rubber nozzle for inserting in the rifle chamber. The box with the cradled rifle was placed in the bathtub. The nozzle was fitted in the rifle chamber and the other end of the length of rubber hose was attached to the hot water faucet. When satisfied that all connections were tight, I simply turned on the hot water and let it flow with force through the bore for a good five minutes.

A couple of drying patches were then run through the barrel. Seldom, however, were they even damp, such was the fast-drying heat transmitted to the barrel metal by the hot water.

The final step was to run an oil-soaked patch through the bore.

Formerly, gun oils were either mineral or hydrocarbon or so-called fatty oils. Genuine sperm whale oil, for example, was just that—a light lubricating oil, with a fishy odor, that possessed the quality of not becoming rancid or gummy.

For many years, Government-sold military rifles shipped to members of the National Rifle Association were packed in Cosmoline. Although some military arsenals are now using a newer product called VPI and other preparations for protection of idle arms, Cosmoline is still used.

Today's gun oils and greases are invariably of carefully formulated ingredients. Addition of silicones to original formulas has likewise improved many oldtime products.

Some of the modern gun oils, like the new Winchester Gun Oil and Anderol Oil, are actually synthetics, yet remarkably efficient as "oils."

There has been a veritable parade of new products for gun care since the long-ago debuts of Hoppe's No. 9, Fiendoil, the original Winchester Gun Oil, Marble's Nitro-Solvent, Stazon Rustoff, Sheath, Jaymac Gun Grease, Houghton's Rust-Veto, Hart's 77, and other oldtimers. Some have proven most efficient.

Even so, many of today's older shooters, as well as sporting goods dealers, remain stubbornly loyal to Hoppe's No. 9. When asked why—in view of the many modern gun cleaning products every bit as good or better—most say that they have associated Hoppe's No. 9 with firearms since boyhood, or else simply like the characteristic banana oil odor. Consequently, some very worthy rival products have had to struggle to get established in retail trade.

I learned long ago that mere application of protective oil or grease will not by itself reliably prevent firearm rusting. The condition of the steel surface on which the oil or grease is applied is a very important consideration. Unremoved moisture or acid-holding fingerprints on gun barrel or receiver can actually result in rusting *beneath* an applied protective coating.

The best bet is to briskly rub all metal surfaces with a clean, dry cloth or tissue before applying protective oil or grease. I follow this procedure

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even though the product being used may claim to dispel existing moisture. It's the sure way!

Another finding is that an oil seldom gives the long term protection of a good grease (like Rig, Gunslick Gun Grease, G-96 Gun Grease, or Gard Anti-Rust spray, which goes on in vapor form but ends up as a greasy film).

Some shooters wrap oily cloths around their guns then wonder why they rust. Fact is, these cloths will eventually absorb moisture and promote rusting!

Preferably, air should be able to circulate over treated surfaces. So long as there is an unbroken film of applied oil or grease, the protection is there.

I once kept a Savage Model 99 rifle on my office wall for almost 10 years, with only occasional wiping inside and out with Rice XF-1[illegible]'s specific instructions are not to seal off [illegible] the firearm, but to let air circulate freely around it, as my open wall display permitted.

A prime cause of rusting firearms in Florida is putting a tightly cased gun on the back seat of a car where it receives the heat of the sun. The initially cool metal of the firearm and the sudden development of heat within the closed case will almost always cause condensation.

Even though outside moisture is wiped off, the gun case lining as well as inside components of the firearm itself will likely have become dampened.

Non porous vinyl and other plastic gun case materials will cut off air and cause condensation inside if kept tight. Far better are cases made of heavy canvas and other fabrics that "breathe."

Whatever the case material, it is always a good idea to at least partially unzip the case when placing an encased firearm in a car, or anywhere that it will be subjected to a marked rise in temperature.

Also, if you have shot a firearm so soon [illegible] it is hot, let it cool before returning it to [illegible] case.

To truly determine bore condition, you must first make sure the barrel interior is entirely free of any deceptive oil film, then introduce illumination. (There are all sorts of bore illuminators. I am currently using the Speck-O-Lite, a battery-powered, illuminator with a flexible light-conveying tube that can be inserted in either breech or muzzle and puts a strong examining light exactly where I want it.)

Those of us who regularly shoot the high velocity big bores are apt to find copper streaks remaining on rifling lands even after judicious cleaning, or else notice fresh deposits on the very next firing. This deposit, actually little more than a copper wash of immeasurable thinness, is metal rubbed off the sides of bullets during their rapid passage through the bore. In these days of non rusting primers, it does no harm if a good nitro-solvent and brass bristle brush does not entirely remove it.

For efficient cleaning of both .22 and center fire bores, I strongly recommend that only quality cleaning rods be purchased—preferably Outers Laboratories stainless steel rods, or similar rods made by Belding & Mull. For emergency use afield, carry an Army-type field cleaning tip and pull-through cord. It could save your hunting day should your rifle bore become clogged inadvertently.

The quality criteria for cleaning rods holds equally true for the cloth patches and brush accessories. I use Outers Laboratories ready-cut cleaning patches and a variety of bristle brushes and wool swabs of the same brand. I cannot afford the annoyance and lost time caused by poor quality accessories coming apart and/or possibly lodging in the gun bore. Outers products have never failed me.

It is important that a cleaning patch be either passed all the way through a rifle bore *and removed* or else not allowed to clear the muzzle before being drawn back through. It should not be permitted to clear the barrel, expand, and be resized as it is drawn back through the muzzle end. Such treatment gradually wears away the rifling at the most vital spot.

Similarly, where cleaning must be done from the muzzle end towards the open breech, the cleaning patch will normally expand when it reaches the chamber section and emerges. If the patch is then pulled back, it will be undesirably resized and reversed in its already-formed "lay." (The same holds true of bristle brushes used.) Also, unless pulled back, each patch has to be picked out of the open action, and each brush carefully unscrewed from the rod tip for the next passage.

There is an easy way to be rid of such annoyance: Take an empty case of a cartridge or shotshell that has been fired in the firearm to be cleaned and tightly pack it to its neck with lead, or insert a wooden plug. When you are ready to clean from the muzzle (only because action is unsuited to breech cleaning) insert the improvised accessory in breech and close and lock the action. Thereafter, the cleaning patch can be worked both ways in the bore, without being pushed through and resized on return pull. When cleaning rifles or handguns from the muzzle end, always use a cleaning rod guide or your fingers to keep the cleaning rod from touching the sides.

Any frequently used firearm will gradually build up grease and dirt deposits in its action and in various recesses. Periodically, component metal parts should be given a brush-bath with a safe liquid, using a pipe cleaner or toothpick to get dirt out of tiny recesses that are missed by hand-brushing.

Carbon tetrachloride is recognized as an effective degreasing agent, but it is dangerous to use. Like the selenous acid contained in some gun bluing solutions, it can be absorbed, with possible serious damage. I, therefore, use mineral spirits both for washing accumulated goo from working parts and for degreasing. I must warn readers, however, that metal parts cleaned with mineral spirits should be thoroughly air dried, then wiped with a clean cloth before any oil or preservative is applied. Otherwise, rusting can occur.

Unless the air source is completely free of moisture, I cannot reliably recommend air-jet cleaning. Many service station and home workshop compressors deliver moisture along with air blasts. You can't see it, but it is there.

Heavy or excess oil in a gun's action slows down springs and firing pin movement, and dirt adheres to working parts. In an autoloader, particularly, too much oil or grease can cause malfunctioning.

In caring for autoloaders, spray moving parts with Rice's XF-15 graphite solution instead of oil. The liquid in the XF-15 mixture dries within 2 minutes, leaving a thin, tough coating of graphite to provide lubrication. Components so treated do not accumulate the dirt that oiled surfaces seem to acquire.

Free'n Kleen (not to be confused with rust-removing Free'n Kleen Oxtrol) seems to do much the same thing, except there is no graphite deposit.

Shotgun bores are comparatively easy to keep in good condition, since their usual large diameters encourage and permit frequent and easy inspection.

Unless long neglected, smoothbore care normally consists of merely periodically deleading with bore brushes or swabs wet with cleaning solvent, followed by light oiling.

Where there are specks of rust from long neglect, wrap a bit of Grade 0000 steel wool around cleaning brush or swab, coat with J-B Bore Compound or some other proven product, and polish the bore to renewed brightness.

Restoration of a badly leaded handgun bore should begin by first brushing with brass bristle brush and solvent, then swabbing the bore dry with a couple of clean patches pushed all the way through and removed from the rod tip.

The next step does the most effective job, however.

Plug up the handgun's breech, hold the gun muzzle up, and fill the bore half full of pure mercury, popularly called "quicksilver." Put a small cork or soft plug in the muzzle and slosh the mercury back and forth from chamber to muzzle at least 50 times.

Mercury has a natural affinity for lead and will pick up and absorb it. Use of the liquid metal cuts down on cleaning rod time and wear.

Finish the cleaning job with solvent-wet and dry patches.

If, one day, you should discover the beginning of rust formation on the blued exterior surfaces of your favorite rifle, shotgun or handgun, don't despair. Cut several 3-inch squares of burlap and saturate them with either pure turpentine or Rusteprufe. Rub the rusting surfaces briskly.

Rusteprufe brings out existing bluing to a remarkable degree, whether unblemished or needing attention. The resulting richness of color is most pleasing.

For removing rust from workshop tools, widespread acclaim has been given to naval jelly. Better, in my opinion, is Oxtrol. The latter preparation penetrates and strips rusted surfaces down to the bare metal itself. It is especially good for taking care of light corrosion on close-tolerance dies and instruments. Oxtrol removes gun blue instantly, so should not be applied to guns not scheduled for rebluing.

For long storage, wipe firearms free of all acid-holding fingerprints and coat metal surfaces with a good rust-preventing grease such as Rig or Gard Anti-Rust. Handle firearm by its wood parts thereafter, and wrap the entire gun in heavy aluminum foil prior to putting it away—preferably in its original box.

Many shooters elect to use VPI, used for storage of military arms and parts, which leaves packed items grease-free and ready for immediate use on unpacking. Usually, items are stored in sealed VPI-treated wrapping paper or sealed in a container with a little VPI powder that gives off corrosion-inhibiting vapor.

The drawback to VPI is that the chemical sometimes exerts a harmful effect on some types of gunstock finish. It's a chance you take when using VPI.

The grease or oil put in rifle chamber and bore to ward off moisture can boomerang unless you remember to remove all traces before the next firing. Grease or heavy oil can build up excessive [illegible] pressure when the firearm is fired, with [illegible] most cases if not serious damage to the gun itself!

Besides running a dry cleaning patch or wool mop accessory through the bore, wipe the chamber and the face of the breech bolt with an absorbent cloth. And just to make sure, dip a folded pipe cleaner in lighter fluid and twist it around in the chamber.

One of the best gun care investments you can make is to purchase a chemically-treated, rust-preventing wiping cloth. You will find such cloths in sporting goods stores and gun shops packaged under such brand names as Silicote Gun Cloth, Outers Silicone Cloth, and G-96 Wiping Cloth.

Use the cloth to wipe the exterior of your gun each time you finish using it. The habit will keep your gun looking like new. The commercial cloths not only remove moisture and acid left from handling, but coat surfaces with a temporarily protective rust-preventing film. ●

CONSERVATION SCENE

Outdoor Writers

The Florida Outdoor Writers Association held its annual meeting and outdoor communicators' awards banquet at Welaka on the St. Johns River in June.

Charlie Harris, outdoor columnist for the Orlando Sentinel-Star, was elected president for 1972–73, succeeding Dr. Herbert Riggs of Daytona Beach. Harris is the first to repeat in the top office of F.O.W.A. since the writers, photographers, and broadcasters organized in 1947. He was president in 1967–68.

The new slate of officers also includes columnist Bill Sargent of Today newspaper, Cocoa, vice-president; freelance artist and illustrator Barbara Brantly of Orlando, secretary; and Art Runnels of Panama City, information & education officer for the Game & Fresh Water Fish Commission, treasurer.

Two F.O.W.A. awards for general excellence in the field of outdoor writing went to Florida Wildlife contributors: Edmund McLaurin of St. Petersburg, who has been writing the monthly gun and hunting column since 1954; and freelance writer Art Hutt of Eustis, probably best known to readers for his many illustrated, in-depth feature stories on biological and environmental subjects.

Other award winners were Charlie Harris, outdoor column, and Peggy Poor, outdoor news feature, both of the Sentinel; Herb Allen of the Tampa Tribune, outdoor news story; Sol Fleischman of station WTVT-TV, Tampa, outdoor television; Roy Martin of Panama City Beach, outdoor radio broadcasting; Ed Barclay of St. Petersburg, outdoor art; Greg Leary and David Beatty, both with Today, Cocoa, for black-and-white and color photography, respectively; and T. N. "Tommy" Anderson, Tallahassee, conservation newsletter.

Anderson was honored as F.O.W.A.'s Outdoorsman of the Year in recognition of his contributions to natural resource conservation in Florida through a lifetime of service in the communications field. He is editor of the Conservation News, published by the Florida Department of Natural Resources, and this year's president of The Nature Conservancy, Florida Chapter. He has held every major office of the F.O.W.A. and several offices in the Florida Conservation Council and the Florida Wildlife Federation.

Shade Trees and You

Shade trees do more for your neighborhood than add beauty, according to U.S. Department of Agriculture scientists.

These beautiful plants screen the sun's rays, soften the lines of buildings and add graciousness to the simplest residence. They also give a feeling of welcome to streets that are usually only functional. Shade trees cool surrounding areas and filter dust particles.

To do their intended job satisfactorily, trees must be carefully selected and maintained until they become established. They require less attention as they grow older.

The use that you intend for your tree and the location in which you plant should guide you in its selection. In deciding which trees to use for quick shade, flowers, or heavy shade, plant scientists of USDA's Agricultural Research Service (ARS) suggest:

Select the FORM that is best for the intended use.

Consider the mature SIZE that is desirable; consider whether growth rate and longevity are limiting factors.

Determine AVAILABILITY of suitable trees and size of tree at planting.

The most favorable planting season for shade trees varies with the region, kind of tree, soil, source of planting stock, and method of handling, as well as with the manner in which trees are grown, dug, stored and transported. However, spring planting is the preferred time in all parts of the U.S.

Success in establishing a tree depends heavily upon the care exercised in planting it. This extra effort should pay off in the long run. Well-planned shade tree plantings can provide many years of added beauty and comfort while giving the landscape a look of permanence and dignity.

For further information on shade trees, you can purchase "Trees for Shade and Beauty" (HG 117) for 10 cents from Superintendent of Documents, Government Printing Office, Washington D.C. 20402. Please include your name, ZIP code, and return address.

DU Waterfowl Projects

Ducks Unlimited, Inc., the non-profit waterfowl conservation organization will finance construction of a record 104 prime wildlife breeding habitat areas in 1972. Announcement of the program, which is expected to cost almost $3 million, was made at the group's 35th Annual Board of

T. N. Anderson, left, with Outdoorsman of Year trophy he received from Florida Outdoor Writers. Gun writer Edmund McLaurin, at left above, receives a magazine column award from Charlie Harris, center, and R. V. "Gadabout" Gaddis.

Trustees Meeting, held at Hilton Head, S. C., recently.

Prior to making the 1972 commitment, delegates were given a report on 1971 which showed that a record \$3,048,000—32% increase over 1970—was raised by DU resulting in a record number of construction projects in Canada. It is expected that DU will have to raise almost \$4 million in 1972 to finance this year's program.

All of Ducks Unlimited projects, although financed by U. S. conservationists, are located in Canada, where 80% of the continent's waterfowl originate. The 1972 program will see work done on over 100,000 acres of wetlands habitat set aside for waterfowl and other wildlife purposes. Ten projects will be located in British Columbia, 36 in Alberta, 23 in Saskatchewan, 23 in Manitoba, and 12 in the Maritimes.

A final highlight of the meeting came at the Annual Banquet, held on Friday, May 12th, when John Ruthven of Georgetown, Ohio, was announced as Ducks Unlimited's Artist of the Year, and he unveiled his commemorative painting for the occasion, entitled "Pintails." Prints of this painting will be available at DU functions throughout 1972 for fund-raising purposes.

Over 400 delegates, wives and guests attended the meeting, including all 10 living past presidents of the organization.

DU trustees from Florida are S. Hallock duPont, Jr., of Miami, and Frank P. Hooper of Summerfield.

For the Young Folks

A NEW SERIES of nature books, each with 64 full-color plates, was launched with the publication of ONLY A LITTLE PLANET by David Brower, President of Friends of the Earth and formerly executive director, for 17 years, of the Sierra Club, with Lawrence Collins and Martin Schweitzer (a Herder and Herder book published by McGraw-Hill Book Co., 330 W. 42nd, New York 10036—\$12.50). The series will be titled, Celebrating the Earth.

As Brower sees it, "If you were grown up and wanted to tell a young child about some of the most important and least expensive things there are, or if you were just a child yourself who already knew about some of these things and wanted to tell a younger child, you might wonder where to begin.

Lawrence Collins wondered, looked about him, and found a beautiful answer, Brower adds. He wrote ONLY A LITTLE PLANET. At the same time, photographer Martin Schweitzer expressed similar feelings through his own medium. Brower comments:

"Sometimes it is hard to tell, looking at the words and photographs as they blend with each other, which is the harmony and which the melody in this beautiful music about the uncounted kinds of beauty there are in this world now, and the kinds there will always be if grown-ups care about them as much as children do."

Clean-up Research

KEEP FLORIDA Beautiful, Inc., wants to know who is cleaning-up and beautifying the Sunshine State, and what luck they are having.

The new state-wide organization, independent of government but created with the blessings of Governor Reubin Askew, who appointed its first Board of Directors, needs the information as the first step in its program of providing coordination and technical expertise to public and private efforts to preserve and restore Florida's natural beauty. It

(*Continued on next page*)

(*Continued from preceding page*)

has asked the help of news media in reaching individuals and organizations now active in anti-litter and beautification programs.

"There are literally hundreds of projects underway, ranging from campaigns involving entire communities and counties through the establishment of recycling programs by industry, to planting programs by garden clubs," said John E. Evans of DeLand, KFB Board Member directing the project. "If we, like our national affiliate, Keep America Beautiful, are to be an effective conduit of helpful information for all these groups, we need to know who's doing what, where and when."

Evans asked that basic information on clean-up and beautification efforts large and small be sent to KFB's Executive Director, Gene Ready, at P. O. Box 1127, Bartow, Florida 33830. He said the results will be tabulated and published to "give the first accurate picture we will have of the extent of the concern Florida citizens have with the beauty and cleanliness of their State, and of how they are translating that concern into action."

Contacts made through the census will form the nucleus of a statewide information network to help coordinate efforts, avoid duplication, and share successes.

New Gun Club Aid

SPORTSMEN WHO find it difficult to locate a gun club in their area or who are tired of standing in line at a crowded club to shoot one round of trap or skeet can solve these problems with assistance from the National Shooting Sports Foundation.

"How to START A GUN CLUB," a thorough 24-page guide for sportsmen interested in starting their own club, is available from the NSSF. The reference includes information on how to organize a club, find land, build membership, promote the club, etc. Many sections of the booklet are also helpful to existing clubs who want to build membership, expand their facilities and conduct special events.

This complete guide, including sample gun club constitution and bylaws, is available for $1.00 from the National Shooting Sports Foundation, 1075 Post Road, R[illegible], Conn. 06878.

Duck Stamp Increase

FLORIDA DUCK HUNTERS will have to dig a little deeper when they purchase their duck stamp for the 1972-73 hunting season. Cost of the new stamp will be $5.00, an increase of $2.00. The increase has received the solid support of duck hunters across the nation.

According to Dr. O. E. Frye, director of the Game and Fresh Water Fish Commission, an announcement by the U.S. Department of the Interior stated that Congress authorized the price increase last December, and that the increase will be effective for the 1972-73 season.

Frye said, "Both federal and state laws require that hunters 16 years of age and over purchase a Migratory Bird Hunting Stamp before hunting ducks and geese. The stamp is not required for hunting other migratory game birds."

All proceeds from stamp sales go into a fund set aside for the acquisition of wetlands and refuges for migratory birds. Wetland acquisition and refuges do much to assure a continuing supply of quality waterfowl habitat and provides the key to future duck hunting.

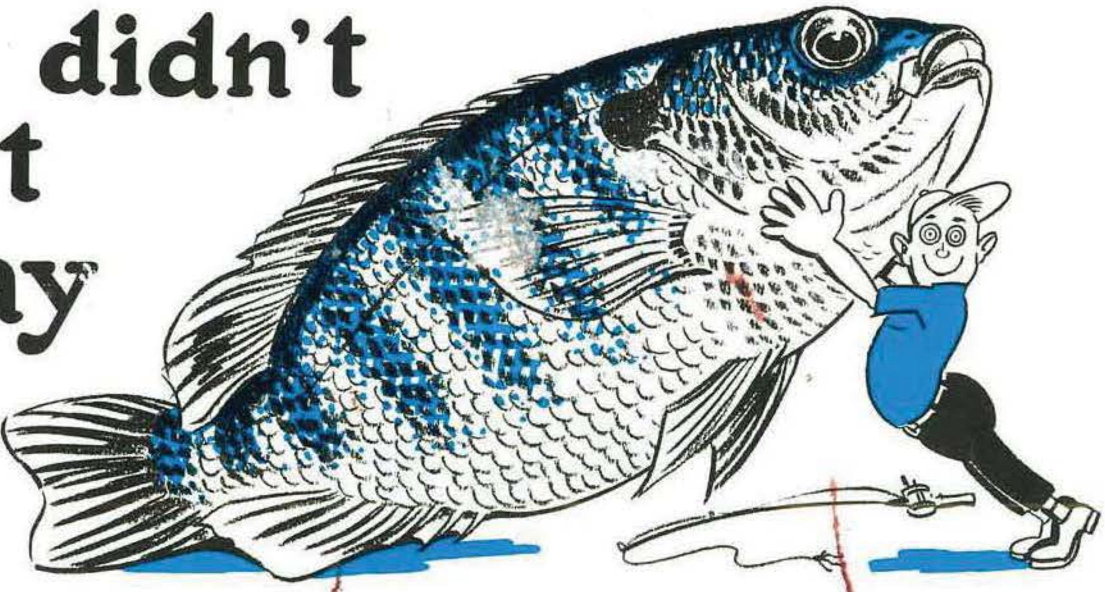
A record high for duck stamp sales was reached during the 1970-71 season when a total of 2,420,244 were sold. During this period, Florida duck hunters and stamp collectors purchased 44,543 stamps.

Ob-Scene of the Month

Photo By Wallace Hughes

"Under the spreading beer can tree. . ."

For that BIG ONE that didn't get away



ELIGIBILITY REQUIREMENTS
SPECIES

LARGEMOUTH BASS	8 pounds or larger
CHAIN PICKEREL	4 pounds or larger
BLUEGILL (BREAM)	1½ pounds or larger
SHELLCRACKER	2 pounds or larger
BLACK CRAPPIE	2 pounds or larger
RED BREAST	1 pound or larger

All fish must be taken from the fresh waters of the state of Florida, as defined by the Game and Fresh Water Fish Commission. Fish must be caught on conventional fishing tackle, with artificial or live bait, in the presence of at least one witness.

The catch must be weighed and recorded at a fishing camp or tackle store within the state by the owner, manager, or an authorized agent of the respective establishment.

FLORIDA WILDLIFE'S
FISHING CITATION

is available without charge, to any and all subscribers to Florida Wildlife Magazine, and their immediate families, who catch any of the fresh-water game fish of the prescribed species and size requirements. Citation, showing recorded date of the catch, will be mailed to the applicant upon receipt of the following application form that has been properly filled out and signed.

Only fishing citation applications received within 90 days from date of catch will be honored.

APPLICATION FOR FLORIDA WILDLIFE FISHING CITATION

The Editor, FLORIDA WILDLIFE Date________
Game & Fresh Water Fish Commission, Tallahassee, Fla.

Please send me the Florida Wildlife Fishing Citation with the inscribed data listed below:

Name (please print)____________________

Address ____________________

City________ State________ Zip No.________

Species________ Weight________ Length________

Type of Tackle____________________

Bait or Lure Used____________________

Where Caught____________ in________ County

Date Caught________ Catch Witnessed By________

Registered, Weighed By____________ At________

Signature of Applicant____________________

CUT OUT AND SAVE THIS APPLICATION BLANK

Young Opossum Photo By Gene Smith

3-10-72 10 4-73
JOSEPH R. BRANDT
512 E. LOWELL ST
LAKELAND, FLA. 33801

FLORIDA WILDLIFE Magazine
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Tallahassee, Florida 32304

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